Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

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LECTURE III.—PART I.

ANTHRAX AND ANTHRACOID DISEASES.

GENTLEMEN,—The disease known as anthrax, charbon, splenic fever, mal de rate, splenic apoplexy, or Milzbrand must next claim our attention. Some of the principal points in the pathology of anthrax were stated by Dr. Burdon-Sanderson in his lectures in this place, but enough work has since been done upon the subject to justify me in returning to it. In addition to the form of anthrax which especially affects the spleen (whence the name splenic fever), there are a number of other forms of disease which are allied to this, but the precise relation of which is at present uncertain. As I have been especially engaged in studying some of these diseases, I shall endeavour to deal with "anthracoid" diseases in general. And with regard to splenic fever, whereas it has been generally supposed that its especial interest in relation to human diseases lay in the fact of the bacterial nature of its virus as a clue to the general pathology of contagion, I hope to show you that it has other points of immediate and practical interest, and that the study of its intimate pathology affords us other valuable lessons.

Splenic fever in this country is a disease which mainly affects bovine animals, but sheep are also liable to be attacked, as are also horses, and it may be readily communicated to most known animals by inoculation, especially to rodents. For a description of the general symptoms of the disease, and the various forms which it is apt to assume, I must refer you to the able article of Böllinger, and to Dr. Sanderson's report.

In addition to this more common form, there are even in this country other diseases conforming in some respects to the type of anthrax, but apparently distinct both in the conditions of their occurrence and their common phenomena, especially the disease known as quarter-evil, or black quarter.

But when we consider anthrax in its general history as seen in other countries, we find that there are a large number of diseases which are so closely allied to anthrax that they are provisionally called "anthracoid." These are widely distributed over the world in Asia, Africa, and Europe. In India we find two or three of these forms which are more or less distinct. As affecting horses in the northern part of India, is the disease known as Lodiana fever, and a similar disease is highly fatal to elephants and camels in various parts of India, as recent experience has shown. Another disease, known as Pali plague, which is prevalent in some parts of India, occurring at times epidemically, and affecting also human beings and rats, appears to be of this nature. In Siberia a similar disease, which affects not only cattle but also men, and is known as the Siberian plague, extends as far as Russia and southwards to the shores of the Caspian. In many parts of Germany and Austria the disease is very fatally prevalent among cattle, both as an epidemic and endemic, and often attacks sheep as well as oxen in large numbers. In some parts of Italy it is of the utmost virulence. In South Africa attention has been specially drawn to the subject by the enormous losses of horses and oxen from these diseases during the Zulu war, in some places the horses dying at the rate of over 50 per cent. a week.

I shall describe later some of the differences between these several forms, but let me now glance at the general conditions under which they may occur, so far as they are known. It would appear both from general considerations, and from the description of various localities, that the situations in which these diseases are endemic are what we may call malarial districts, a point of considerable importance. Heusinger, in 1850, stated that he considered anthrax to be a malarial neurosis; and Virchow, in 1855, agreed as to its malarial nature.

In this country some of the forms are almost limited to low-lying pastures; in Italy an intensely fatal form prevails in the Pontine and other marshes, and in Africa and in India the same is the case. But so highly contagious are these diseases that some forms spread both sporadically and epidemically to even high altitudes.

Speaking generally, all these diseases are characterised by a rapid blood-poisoning, either with some local swelling and œdema, or scattered hæmorrhages, and other conditions, not unlike those of acute septicæmia. In the human subject there is often a peculiar carbuncle, hence the name charbon.

Of the common anthrax or splenic fever we now know that its poison consists in a bacterium, so-called bacillus anthracis, or bacteridium, as it was called by Davaine, to distinguish it from bacteria which had the power of motion.

Of the other forms it is uncertain whether they are but modifications of the same disease, or whether they only resemble it in certain characteristics, and whether a number of distinct diseases are not erroneously classed together.

This point will be more evident when I have described the general characteristics of ordinary anthrax and its pathological anatomy.

A large number of known vertebrate animals, or rather those in which the inoculation has been attempted, even frogs, have been found capable of infection with the anthrax poison, which seems to thrive under the most diverse conditions. It is stated by some that the pig is not capable of inoculation; but, on the other hand, feeding swine with flesh or blood from animals dying of anthrax is by some stated to produce an analogous disease, by others to give rise to a disease something like diphtheria. But that certain effects—although not necessarily the specific effect—are produced in swine by subcutaneous inoculation of blood from anthrax has been clearly demonstrated, this action being the production of intense local inflammation, and sometimes of swelling, or even suppuration of the lymphatic glands. In some experiments the dog has also proved refractory to the poison, only a large local inflammatory swelling being set up, but in other cases the typical phenomena have been produced. It is well known that M. Pasteur has recently shown that fowls may be made to take the disease by reducing their temperature—a fact of considerable importance in its general bearing on transmission of contagion.

It is now generally regarded as an established fact that the contagium of anthrax resides in the organism discovered by Delafond, and later by Pollender, and called by Davaine bacteridium, by Cohn bacillus anthracis. All the recent work which has been done upon this subject is confirmatory of this view, and the apparently negative results seem to be explicable in accordance with it.

I have already described the general characters of this organism, and the changes which it undergoes in development, and have pointed out that none of these are absolutely peculiar to it, but only the fact of producing the disease when inoculated. In what way the bacillus acts in causing the disease, and its fatal result, will best be considered after describing the phenomena of anthrax when artificially produced.

Certain differences have been observed, according as the bacilli are directly injected into the blood, or are inoculated in the subcutaneous tissue. In the former case, if the animal is one liable to the disease, the symptoms are developed more or less rapidly according to the quantity introduced; in the latter, there is usually more or less swelling, which may be merely a slight local œdema, or a large red swelling, which may even suppurate. The intensity of the swelling is apparently proportional to the resistance of the animal to inoculation, and may perhaps be regarded as in some measure protective.

This fact of local inflammatory swelling is of great importance in relation to the other diseases so-called anthracoid; and it moreover shows that there is in connexion with anthrax bacillus some irritant property, dependent either on some substance formed in its growth or some direct action on the tissues. That it is due to the production of some

irritant is indicated by the fact that the inflammation is more intense when the blood has been in contact with the bacilli for some hours, and that without the occurrence of putrefaction (Toussaint).

The channel by which the poison enters the system, or rather the blood, is variously stated: some holding that the bacilli pass directly into the blood-stream; others, that they are first taken up by the lymphatics, and conveyed by them into the blood—in the latter case, of course, first passing through the lymphatic glands. M. Colin has shown that this is the case in some animals; that tumefaction of the glands adjacent to the source of infection occurs, and that in the glands are to be found the bacteridia. M. Colin has endeavoured to show that some poison introduced into the blood is the cause of the symptoms, the bacilli remaining in the glands. But on this point his observations are absolutely contradicted by Toussaint, who has shown that the symptoms are coincident with their entrance into the blood. My own observations lead me to believe that in mice and guinea-pigs the bacilli pass almost directly through the capillaries into the blood-stream, after having undergone some development in the serous exudation which is caused by the direct irritant action of the material shown by Pasteur and Joubert to be secreted by the bacteridia, which M. Pasteur considers allied to diastase. In those animals in which there is more local reaction—even in the rabbit—the glands are swollen, and contain bacilli; but their entrance into the blood takes place in the glands, not after completely traversing the whole system to the thoracic duct.

The symptoms of anthrax, whether spontaneous—i. e., accidental—or inoculated, are extremely variable. In some animals, e. g., the mouse and guinea-pig, and even the rabbit, the symptoms are practically *nil* until near the moment of death. During the time preceding the actual entrance of the poison into the blood there is practically no symptom whatever. After this there is rise of temperature in the rabbit of 2° or 3°, and usually a fall of 1° or 2° before death. There are febrile symptoms, accelerated pulse and respiration, and refusal of food.

Until very near the time of death one may hardly be able to find any bacilli in the general blood, or only one or two on examination of several slides, but towards death the number very greatly increases—in fact, may equal or exceed the number of red blood-corpuscles. This fact is a very important one, in reference to the observations on the presence of micrococci in the blood in pyæmia; for if we kill the animal we find the blood in some organs swarming with bacilli, whilst that of the general circulation contains scarcely any. The blood also contains an excessive number of white corpuscles.

The condition of the organs after death is also very variable. In most animals we find swelling of the spleen, but not usually in guinea-pigs. In those animals which, like horses and dogs, resist the entrance of the poison, and also in cows, there are often large hæmorrhages, and local serous exudations.

The enormous rapidity of the production and multiplication of bacilli may well be illustrated by the following experiment:—A guinea-pig having died of anthrax, some fluid was taken from the peritoneum in a capillary tube shortly after death. This on microscopical examination appeared to be free from rods. A quantity not more than $\frac{1}{100}$ of a cubic millimetre was inoculated in the tail of a mouse. Twenty-four hours later the mouse died with the usual symptoms. The blood and spleen were examined immediately after death, and were found to be simply swarming with rods. At first sight it might seem that this was a proof that the presence of rods was unnecessary either for the carriage of the contagium or the production of the bacilli. But this would no doubt be an error. For although I could discover none in the inoculated fluid I could hardly doubt that there were some, seeing that all the other tissues swarmed with them and I only examined a portion of the fluid. On the other hand, I think it must be allowed that they are more irritant in their action, and cause death more rapidly when directly inoculated in the fluid from an animal just dead of the disease, than when cultivated, at least such is the conclusion from my own observations.[1]

[1] Further experiments, completed since the delivery of this lecture, have led me to the conclusion that the poison becomes progressively less virulent in successive generations of artificial cultivation. I have thus been able to obtain a modified virus, which when inoculated produces much less severe symptoms, and appears to be partially protective against future more severe attacks.

Condition of the Blood.—In some cases, especially when the number of bacilli is small, we find but little change, at most some increase in the number of leucocytes, the coagulation taking place naturally. But when the number of bacilli is great, the power of coagulation is greatly impaired, partly, I believe, mechanically; partly, it may be, by their chemical action. It is sometimes erroneously stated that the bacilli disappear from the blood after the commencement of putrefaction, and that the contagious property is always lost when putrefaction has occurred. The decision of the first question is very important, because if they so disappear, those bacilli discovered after putrefaction is complete may be supposed not to be specific; and the second, because, if so, when putrefaction sets in, contagion ceases. The first point was found to raise so much difficulty in investigations into diseases supposed to be anthracoid, that I found myself compelled to try to solve it. A guinea-pig, having died from inoculation with anthrax-spores, was examined shortly after death, and the blood found to be swarming with bacilli. It was then left in a warm room in the laboratory for a fortnight, and the blood and spleen examined from time to time. The bacilli were found to persist in their ordinary state for about nine days, although putrefaction had of course set in. By the fourteenth day the spleen had become a mass of decomposing filth, but on examining it I found it still swarming not now with rods, except some pieces containing spores, but with abundant spores, some with pieces of rod attached. There were also abundant micrococci and bacteria of common kinds. With a very minute quantity of this matter I inoculated a guinea-pig. Forty-eight hours later there was a scarcely perceptible swelling at the seat of inoculation, containing only serum in small quantity, in which were a few bacilli. In the blood from the ear were only seen one or two, but these were very long, and perfectly characteristic. Subsequently the animal died on the third day, with the usual morbid appearances, and its blood was found to swarm with bacilli. On the sixteenth day the spleen of guinea-pig No. 1 was still more decomposed, but still swarmed with the spores, mingled with abundant micrococci.

The view generally entertained as to the mode of action of bacillus anthracis is, that it removes the oxygen from the red blood-corpuscles, being, as Pasteur has shown and as has been confirmed by many others, dependent on the presence of oxygen for its free growth, belonging to his class of aerobiæ, as do other organised ferments. Now, although, in the case of an organism which we know may grow in twenty-four hours in the blood in such a way that the number of rods equals or exceeds that of the red blood-corpuscles, the amount of oxygen thus absorbed must be large, the precise determination of this must be a matter of difficulty, for, as I shall show, the enormous obstruction to circulation in the lungs must cause great increase in the amount of carbonic acid and relative diminution of the oxygen. No sufficient analyses of the gases in the blood have as yet been made to determine this point. Another factor must come into play—viz., some irritant property—in order to account for the rise of temperature observed in cases of cure.

Distribution of Bacilli in Anthrax.—One of the most striking points in the morbid anatomy of anthrax is the enormous number of bacilli, and the way in which sometimes they crowd the blood and tissues. One might indeed imagine, from the way in which the blood sometimes swarms with them, that they would be found equally in nearly all the organs. This, however, so far as my observations go, is not the case. Nor are they always especially abundant in the spleen in those cases which I have examined. In the heart they are often found in very great abundance crowding the vessels, appearing alongside the vessels in the inter-muscular spaces, and forming here and there masses which completely plug the small vessels, and lead to extravasation of blood, which, of course, also contains bacilli. In the lungs they are well seen, owing to the arrangement of the capillaries in the alveolar walls, but they more rarely lead to infarction. They do not usually appear in any great number in the pleura. The liver is sometimes very free from them; when found they are especially in the hepatic veins and their intralobular tributaries. The kidneys usually contain them in very large numbers, chiefly in the glomeruli and their afferent and efferent arterioles, and in the parts of the vessels in immediate continuity with them. Many of the afferent arterioles are almost completely plugged by masses of them; in the glomeruli themselves, especially near the surface of the organ, they lie in parallel

bundles in such a way that the capillaries appear to be striated, and sometimes they form a mass which may occupy a considerable portion of the glomerulus. I have in some of these masses seen the formation of spores—a fact I believe of great importance. Rupture of the glomerulus may occur, and the bacilli, accompanied, of course, by blood, escape into the convoluted tubes, where they may grow to a considerable length. Koch states that they do not pass beyond this position, and that he has never seen them in any part of the straight tubes. It must, however, be remembered that he is speaking only of rabbits and mice.

There are many indications which lead me to believe that either bacilli or spores must in the majority of cases pass into the urine and be voided with it, and that this may serve as one of the most important carriers of contagion. I shall, therefore, consider it a little more in detail. First, with regard to the glomeruli. It is quite possible that after rupture of the capillary network has occurred, and a quantity of blood has been extravasated, that very few of the bacilli may traverse the tortuous channel and reach the bladder; but what we know of the passage of blood in the urine under analogous conditions leads me to believe that some small quantity must pass. Again, I have frequently observed that individual bacilli can pass through the capillary wall, and even through the walls of large vessels. Some may therefore pass into the urine whilst the network is as yet unruptured.

Again, we know that the urine is an excellent nutrient fluid for bacilli, and that they can go on to the formation of spores. Once escaped into the urinary tract, one or two bacilli may serve to contaminate the whole of the urine.

Apart from the glomeruli, the relations of the vascular supply of the pyramids may explain a more direct mode of entry of bacilli by rupture of the capillaries, or of course they may escape into the bladder; but the importance of the other method is, I think, especially in the possibility of the acquisition of a more stable form and of spore formation.

Anthrax has been communicated by Feser and others by means of the inoculation of urine of animals suffering from the disease. When we consider the very numerous ways in which the poison thus excreted may, having acquired a stable form, become dried in fodder or hay, or spread on the ground in manure, and subsequently be introduced by various channels into the system, especially of animals which, like cows and sheep, are apt to have their food more or less mingled with excreta, we need seek for no more ready mode of preservation and conveyance of the contagium. This fact, if it leads to more rigorous sanitary precautions (such as to the thorough destruction of all litter, &c.), may prove of great value in limiting and controlling this most terrible scourge.

The widespread distribution of the bacilli in the capillaries of all the organs which are concerned in the most important functions of animal life is suggestive of other modes in which they may cause death than by their direct action on the blood. Unquestionably they must interfere with oxygenation by taking from the red corpuscles their needful amount of oxygen, and appropriating it to their own growth; but their mere mechanical effect must also be considered, impeding, as it must, the action of the heart, the circulation and air-absorption in the lungs, the excretory function of the intestines and kidneys, and so on, of nearly all the organs. And in corroboration of this view are the often observed facts of preservation of intelligence and some power of action till very shortly before death, of the lowered temperature which precedes death, and of the frequent absence of the ordinary symptoms of septic poisoning, properly so called. So far as I have seen, there are but slight changes in the blood taken from a large vessel, the defective coagulation depending on the mechanical presence of bacilli, whilst the capillaries of the organ are crowded with bacilli, and the phenomena associated with early decomposition are much less frequent than in many forms of blood-poisoning. I shall be able to show you these organs, so need not further describe them now.

Koch states that he has found the bacilli especially in the lungs, liver, kidney, spleen, intestine, and stomach, least abundant in brain, skin, muscle, and tongue. He does not mention the heart. With regard to the brain, Koch's statement is directly opposed to that of E. Wagner, who found them in greatest abundance in that position.

In a valuable work by Toussaint, which has just appeared, he not only corroborates these observations as to the distribution of the bacilli in anthrax, but has much extended them. He believes that the action of the bacilli is mainly due to their obstruction of the general circulation by impaction of the bacilli in the capillaries.

SOME NOTES ON SURGICAL FEVER AFTER OPERATIONS.

(WITH TABLES.)

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In the progress of surgical as of medical cases, the propriety of making thermometric observations is now recognised by all classes of practitioners, and although their precise value may not be yet fully understood, there can be no question as to the facts, that a high temperature maintained for many days is strongly suggestive of grave constitutional trouble, and a low one consecutively registered, or any very rapid fall of temperature means a failure of power. At the same time it is not to be doubted that in certain subjects any mental emotion, the slightest injury or operation, or even a constipated condition of the bowels, may be followed or accompanied by a higher temperature, and that a high temperature for a day in the course of a surgical case is not a point to excite alarm. In the present communication I propose, however, to confine my observations to the question of high temperatures after operations, or to what is known as "surgical fever," for I want to show that the immunity from such fever which the advocates of the "spray system" claim so persistently to belong to their practice, and to theirs alone, is shared with others, and that the practice which I adopt, and which I believe other surgeons adopt, is not followed in the majority of cases submitted to operation by any persistent elevation of temperature, or even by any at all after the first day or so, and that the constitutional disturbance associated with the rise in the temperature is rarely severe.

With the view of demonstrating these points—with the kind assistance of Mr. Everard Row—I have taken from my note-books ninety cases of large operations, the majority of which have occurred during the last two years, and have tabulated them in three classes. The *first*, including 33 operations for tumours of soft parts, as of breasts, &c. The *second*, 37 operations on bones and joints. The *third*, 20 operations, involving cavities such as the abdominal or pelvic. Under the heading "Temperatures" I have quoted from the case-book the highest point which had been registered during the day, and in saying this I am bound to admit, and with regret, that had the morning and evening temperatures been systematically taken in all the cases the tables would have been of great value. But such was not the case. Still, I am disposed to think that if the accuracy of observation demanded for scientific deduction be absent, there is enough to support, if not to prove, the view I wish to bring forward.

Analysis of Tables.

The *first* class (Table I.), that of tumours of soft parts, includes 33 cases, 21 being tumours of the breast. In 11, or one-third, of these it may be said that the temperature never rose to fever-point; it never reached 100°. In 13 it rose to 100° or 102° on the first day after the operation, to fall in 10 cases to the normal point during the next two days, and in the remaining 3 within the week. In 5 cases the temperature rose to 100° or more on the second day, when on the first it had not been high, but in all to sink within a day or so to the natural standard; and in 4 it rose on the third day to the higher point, but to decline in two or three days. In only two cases out of the whole number was the temperature of 100° maintained for more than two or three days.

The *second* class (Table II.) includes operations on bones, excisions, amputations, &c., and numbers 37 cases; 34 of these recovered, and 3 died. One of the three fatal cases sank from gangrene (Case 31), the thigh having been amputated high up for gangrene, following a rupture of the femoral artery. The second sank from broncho-pneumonia (Case 32) after an amputation for cancer of the forearm, the patient being

sixty-one years of age. And the third case from diphtheria, after excision of the elbow (Case 37). In all of these the temperature became high within three days, and never sank. Of the 34 cases which recovered, in 10 the temperature never rose to 100°, or, indeed, above normal. In 13 it reached 100° to 102° on the first day, but in all to fall the next, and not to rise again. In 8 the temperature rose to 100° on the second day, when it was low on the first, and in all subsequently to decline. And in 3 cases the temperature rose on the third, fifth, and seventh days respectively, but in all to fall. In some five or six of the cases the temperature rose again during their progress for one or two days, but never to last, the temporary elevation being usually explained by some bowel condition or retention of fluid in the wound. In most of, if not in all, the cases the course of the wounds may be said to have been aseptic.

The *third* class (Table III.) includes operations on the abdominal and pelvic cavities, and numbers 20 cases, two of which died; one of kidney disease following stricture of long standing (Case 4), the other of exhaustion following gastrotomy (Case 16). In 9 cases the temperature never rose; in 4 it rose on the second, fourth, fifth, and sixth day respectively, but only for a day; in 7 it rose on the first day to 100° or 102°, falling in 6 of the cases to normal during the next two days, and rising again in only 3 on one or two occasions.

Summary.

If we take the whole 90 cases together, excluding the three fatal cases in Table II., it will be seen that in 30, or one-third, the temperature never rose to fever-point or up to 100°; in 33, it rose on the first day to 100° or 102°, falling during the next two days; in 14, it rose on the second day to 100°, when it had been low on the first; and of the remaining 10, it reached 100°; in 6 on the third day, in 2 on the fourth day, in 1 on the fifth day, in 1 on the sixth day, and in 1 on the seventh day, but only for the day.

I may state that in all these cases submitted to operation, the mode of dealing with the wound during, and of dressing the wound after, the operation was alike. In every case I either twisted the bleeding arteries, or, in exceptional cases, secured them with the carbolised gut ligatures. In all I washed the wound after the operation with warm water containing about two drachms of the compound tincture of iodine to a pint of water, bringing it to a light sherry colour, and used sponges washed in the same, employing a hot sponge in a large proportion of the cases to check completely capillary hæmorrhage. In all, when possible, I brought the edges of the wound carefully together by means of silk or wire sutures, alternating with some strips of waterproof strapping, and made free provision for effective drainage, and in all I covered the wound with lint saturated with a solution of terebine in olive oil in the proportion of one part to five. In most I fixed over the wound a firm pad of cotton-wool, lint, gauze, or sponge, with some moderate pressure applied by means of strapping or a bandage, and where limbs or joints were involved, kept the parts in absolute rest upon a well-padded splint.

In the majority of cases the wound was not dressed till the third day, and then only when there was the slightest suspicion of any retained secretion or elevation of temperature. In dressing the wounds the greatest care was observed not to disturb the parts more than was absolutely necessary for purposes of cleanliness. In the majority of cases a good result was obtained; and let me add that in no instance during 1879 did pyæmia occur, or was there any trace of blood-poisoning, and in no case was erysipelas recorded.

TABLE I.—OPERATIONS ON SOFT PARTS, TUMOURS, ETC.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation. 1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	8th day.	9th day.	10th day.
1	H. F.	40	Carcinoma of breast	Excision, Jan. 14th, 1879	Cured	Feb. 19th	101°	...	...	...	...	...	99°	*	98.4	98°
2	H.	36	Adenoma of breast	Excision, Jan. 21st, 1879	Cured	Feb. 4th	100	98	98.4	98	98.4	98.4	98.6	98°	98.4	
3	H.	70	Ulcerating cystic cancer of breast	Excision, Jan. 31st, 1879	Cured	March 11th	100	100.2	99.2	98	98	98.4	98.6	98.2	99.2	98
4	O.	42	Cancer of breast	Excision, Feb. 4th, 1879	Cured	Feb. 18th	100.4	100	100.2	100.6	100.4	100.4	99	99.2	98	
5	E.	57	Cancer of breast	Excision, March 18th, 1879	Cured	March 31st	100	98	99.4	98.4	98.4	98.4	98.4	98.4	98.4	
6	A.	68	Cancer of breast	Excision, April 6th, 1879	Cured	June 17th	100.4	98.6	98.4	98.4	98.4	98.4	98.4	98.4	98.4	
7	J.	38	Cancer of breast	Excision, June 27th, 1879	Cured	July 23rd	100.2	98.8	98.4	98.4	98.4	98.4	98.4	98.4	98.4	
8	W.	39	Cancer of breast	Excision, July 22nd, 1879	Cured	Aug. 14th	100.2	98.6	98.4	98.6	98.4	98.4	98.4	98.4	98.4	
9	E.	39	Adenoma of breast	Excision, July 19th, 1879	Cured	Aug. 10th	99.2	97.4	97.8	98	98	98	98	98	98	
10	M. A. T.	47	Sarcoma of breast	Excision, Aug. 7th, 1879	Cured	Oct. 8th	100	100	97.8	98	98	98	98	98	98	
11	W.	44	Cancer of breast	Excision, Nov. 11th, 1879	Cured	Dec. 1st	100	100.6	100.2	100.2	98.4	98.4	98.4	98.4	98.4	
12	J.	62	Cancer of breast	Excision, Nov. 11th, 1879	Cured	Dec. 21st	98.8	99.8	101.1	100.8	100	98.6	98.4	98.4	98.4	
13	E.	62	Cancer of breast	Excision, Nov. 28th, 1879	Cured	Jan. 6th	98.4	101.3	99.6	99.2	98.4	98.4	98.4	98.4	98.4	
14	M.	44	Sarcoma of breast	Excision, Feb. 7th, 1880	Cured	July 28th	98.4	99.2	99.4	98.4	98.4	98.4	98.4	98.4	98.4	
15	C.	33	Adenoma of breast	Excision, July 22nd, 1878	Cured	Jan. 28th	98.4	99.4	99.4	98.4	98.4	98.4	98.4	98.4	98.4	
16	M.	50	Cancer of breast	Excision, June 13th, 1879	Cured	July	101	101	102	101.8	98.8	98.4	98.4	98.4	98.4	
17	A.	50	Cancer of breast	Excision, Feb. 6th, 1878	Cured	Feb. 28th	100	100.2	100.2	99.4	98.6	98.4	98.4	98.4	98.4	
18	W.	54	Cancer of breast	Excision, July 28th, 1878	Cured	Aug. 20th	97.2	98	100.3	100.1	100.1	98.4	98.4	98.4	98.4	
19	M.	34	Adenoma of breast	Excision, Dec. 13th, 1879	Cured	Jan. 3rd	98.6	98	98.6	98.4	98.4	98.4	98.4	98.4	98.4	
20	E.	57	Sarcoma of thigh	Excision, March 1st	Cured	March 24th	100.6	100.6	100.4	98.6	98.4	98.4	98.4	98.4	98.4	
21	M.	60	Large sebaceous tumours in head	Excision, Jan. 3rd	Relieved	Jan. 16th	101.8	101.9	100.4	98.6	98.4	98.4	98.4	98.4	98.4	
22	C.	69	Large hygroma over knee	Excision, Dec. 2nd	Cured	Dec. 17th	98.4	98	98.6	98.4	98.4	98.4	98.4	98.4	98.4	
23	E.	33	Cancer of penis	Amputation, Jan. 10th	Cured	Feb. 10th	98.6	98.6	98.8	98.8	98.4	98.4	98.4	98.4	98.4	
24	H.	44	Cancer of penis	Amputation, Feb. 14th	Cured	Feb. 29th	98.6	98.6	98.6	98.6	98.4	98.4	98.4	98.4	98.4	
25	W.	44	Large lipoma	Excision, Feb. 7th	Cured	March 11th	99.4	100	100	98.4	98.4	98.4	98.4	98.4	98.4	
26	G.	44	Sarcoma of thigh	Excision, March 16th	Relieved		99	100	100	99.2	98.4	98.4	98.4	98.4	98.4	
27	E.	44	Cancer of lip	Excision, Aug. 1st	Relieved	Aug. 8th	100.2	100.2	100	99.6	98.8	98.4	98.4	98.4	98.4	
28	H.	28	Hæmatoma of calf	Incisions &c., Nov. 10th	Cured	Dec. 17th	98.6	99	98.6	98.4	98.4	98.4	98.4	98.4	98.4	
29	C.	28	Hæmatoma of calf	Incisions &c., Nov. 13th	Cured	Dec. 2nd	98.4	98.6	98.4	98.4	98.4	98.4	98.4	98.4	98.4	
30	H.	33	Large varix of saphena vein	Excision, May 14th	Cured	July 3rd	98.4	99.4	100.4	99.2	98.8	98.4	98.4	98.4	98.4	
31	R.	33	Parotid tumour	Excision, July 17th	Cured	Aug.	98.8	100.4	99.2	98.8	98.4	98.4	98.4	98.4	98.4	

* Wound healed rapidly.

† Wound healed on third day.

TABLE II.—OPERATIONS ON BONES AND JOINTS.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation. 1st day	2nd d.	3rd d.	4th d.	5th d.	6th d.	7th d.	8th d.	9th d.	10th d.	11th d.	12th d.	13th d.
1	W. D.	18	Disease of elbow	Excision, April 24th, 1878	Cured	..	100°	98·6°	97·6°	98°	98·6°	97·6°	98·6°						
2	S. S.	43	Disease of wrist	Remov. necrosed (semilun. bone).	Cured	..	98·9	98·6	98·6	97·6	98	98	98						
3	W. H.	9	Disease of elbow	Excision, August (Feb. 22nd	Cured	..	98·4	100	99	98·4	98·6	98·4	98·6	98°					
4	A. B.	5	Disease of knee	Excision, Jan. 18th	Cured	..	98·1	102·8	102·1	101	102·2	98·8	99·7	99	98·6°	98·4°			
5	H. P.	19	Disease of knee	Excision, Jan. 30th	Cured	..	99·2	100·4	100·3	100·4	101·1	99·4	98·6	98·5	98·4				
6	M. T.	18	Tarsal disease	Removal of bone, June 26th	Cured	..	101	100	97·1	97·6	97·8	98·4	98·4						
7	W. S.	6	Disease of elbow	Excision, July 10th	Cured	..	98	99·5	99·6	98·5	98·6	98·2	98·4	98·4	98·4				
8	L. M.	6	Disease of hip	Excision, June 13th	Cured	..	98	98·4	99·6	98·6	98·2	98	98·6	98·4					
9	G. D.	15	Disease of elbow	Excision, April	Cured	..	98	101·2	100	99	100	99	98·5	98					
10	G. D.	10	Disease of elbow	Excision, June 27th	Cured	..	99·2	99	102	98·4	99·2	99	99·3	98·4	98·2				
11	E. J.	12	Disease of elbow	Excision, August	Cured	..	99	98·6	98·6	99·3	98·4	98·6	98·4	98·6	98·6				
12	E. D.	11	Disease of hip	Excision, December	Cured	..	99·2	98·4	99·3	99·6	100·2	99	100	99·3	98·2	98·2	98°		
13	E. R.	4	Disease of hip	Excision, Feb. 11th	Cured	..	100·2	99·8	99·2	99·3	99·6	98	98·4	98·4	98·4				
14	A. H.	15	Abscess in head of tibia	Trephining bone, March 11th	Cured	May 21st	101·2	99·4	98·8	98·6	98·4	100·2	100·9	97·8	98	98·5	98		
15	E. C.	3	Necrosis of tibia	Sequestrotomy, March 2nd	Cured	June 23rd	99·6	99·6	98·6	99·1	98·5	98·5	98·5						
16	H. W.	38	Necrosis of femur	Sequestrotomy, May 21st	Relieved	..	99·4	99·4	98·2	99	99	98	98·6						
17	S. T.	33	Necrosis of tibia	Sequestrotomy, July 8th	Cured	Aug. 28th	100·6	98·8	98·2	98·6	98								
18	E. F.	7	Necrosis of tibia	Sequestrotomy, July 8th	Cured	Aug. 13th	100·6	98·8	98·5	98·6	98								
19	C. R.	14	Abscess in tibia, with necrosis	Incisions, Jan. 13th.	Cured	June 28th	98·6	100·3	99·2	99·2	99·8	98·4	98						
20	R. K.	47	Necrosis of humerus	Sequestrotomy, Nov. 6th	Cured	..	98·2	102·6	100·2	99·6	99	98	98·5						
21	H. P.	19	Genu valgum	Osteotomy, Feb. 17th	Cured	..	99·2	99·6	99·4	99·2	98·8								
22	L. W.	5½	Disease of hip	Excision, June 15th	Cured	June 22nd	100·7	100·2	99·3	99·4	98·6	99	100·6	99	98·4	98·4			
23	W. B.	25	Extensive disease of carpus	Amputat. of forearm, March 21st	Cured	April 22nd	101	100·6	99·6	99·8	98·2	98	98						
24	R. W.	21	Disorganised knee and ankle joint	Amputation of thigh, Jan. 27th	Cured	Aug. 7th	101	100·8	99	98·2	98								
25	H. N.	9	Disease of ankle	Pirogoff's amputation, July 25th	Cured	Nov. 6th	100·3	100·6	99·4	99·6	98·5	99·2	98·4						
26	W. N.	42	Disorganised knee and necrosis of tibia	Amputation of thigh, Oct. 16th	Cured	Nov. 5th	102·7	100·1	101·6	99·6	100·8	101·9	99	98·6	98·5	98			
27	W. B.	23	Extensive disease of knee	Excision, April 18th	Cured	September	99·4	99·6	98·6	99·6	99	98	99·4	99	98·4	97·6			
28	I. A.	19	Disease of elbow	Excision, May 2nd	Cured	July 3rd.	101	100·2	98	99·6	100·2	98							
29	J. O.	11	Disease of hip	Excision, Jan. 31st	Cured	Nov. 10th	99·2	100	101·1	98·8	101·6	100	99	98·6	97·9	97·9	98·3		
30	W. G.	19	Gangrene of foot from crush	Amputation, Oct. 16th	Cured	Dec. 10th	106	98·2	100·4	99·6	100	99·2	101·1	99	100·2	99	100·3	99°	98·2°
31	W. J.	33	Gangr. of leg following ruptured femL	Amputat. thro' thigh, Jan. 31st	Died	March 3rd	102·6	102·8	103·2	102·8	99·8	102·4	99·8	100·6					
32	W. L.	61	Cancer of forearm	Amputation, Jan. 10th	Died*	Feb. 1st	98·4	103·5	104	104									
33	A. W.	15	Enchondroma of great toe	Excision, May 20th	Cured	June	98·6	98·4	98·8	98	98	98·4							
34	W. F.	10	Disease of hip	Excision, Aug. 22nd	Convalescent	..	98·4	101·2	98·6	98·7	98·4	99·2	99·2	99·2	98·6				
35	R. B.	52	Disease of knee	Amputation, Aug. 24th	Cured	Jan. 6th	99·4	99·1	98·4	98·4	99	99·2	101·6	98·2	100	98·4	99·3	99·6	97·9
36	G. S.	30	Tumour of lower jaw	Removal of bone, May 30th	Cured	..	99	99·8	97·8	97·7	97·4	97·2	97·6	98	98·7	97			
37	G. H.	11	Disorg. elbow w. acut. periostitis of ulna	Excision, June 7th	Died	Jan. 7th	99·8	98·6	100·3	100·7	100·9	101·2	100·3	100·2	100·8	102	100		

TABLE III.—OPERATIONS INVOLVING CAVITIES ETC.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation. 1st day.	2nd d.	3rd d.	4th d.	5th d.	6th d.	7th d.	8th d.	9th d.	10th d.	11th d.	12th d.
1	J. B.	5	Stone in bladder	Lithotomy, Nov. 11th	Cured	Dec.	98·4°	98·3°	98·4°	98·5°	98·5°							
2	S. S.	38	Broken catheter in bladder	Median lithotomy, April 1st	Cured	April 26th	98·8	98	97·8	97·8	97·6	98°	98°	98°				
3	T. M.	40	Calculus on broken catheter	Median lithotomy, June 24th	Cured	July 8th	98·6	98·5	98·5	98	98·6	98						
4	R. W.	39	Bougie in urethra behind stricture	Perineal section, Dec. 9th	Died†	Jan. 3rd	102	99·6	98·6	99	98	98	98·6	98				
5	J. G.	57	Stricture and extravasation	Perineal section, Oct. 9th	Cured	Nov. 6th	101·2	101·6	100·6	98·8	99	98·2	98·4	98·2				
6	R. C.	31	Ruptured urethra	Perineal section, Jan. 30th	Cured	..	102	100·2	98·8	99·2	99	100	99·6	98	98·6°			
7	J. L.	28	Vesico-vaginal fistula	Plastic operation, Aug. 5th	Cured	Sept. 17th	98·7	97·8	99·2	98·4	97·8	98·2	98·2					
8	M. A. T.	50	Stricture of rectum	Colotomy, Dec. 5th	Convalescent	Jan.	101·1	98·8	99·7	99	101	101	98·4	98·4	98·6			
9	E. C.	29	Stricture of rectum	Colotomy, Feb. 5th	Convalescent	..	99·2	99·6	100	100	98·6	98	98	98·4				
10	C. H.	28	Stricture of rectum	Colotomy, May 10th	Convalescent	..	104	99·2	98·2	98·1	98·5	98	98·5	99	98·5			
11	W. B.	25	Stricture of rectum	Colotomy, July 10th	Convalescent	..	99	100·8	100·2	99·1	98·4	98·7	98·3	98				
12	J. B.	39	Stricture of rectum	Colotomy, June 22nd	Convalescent	..	101·8	99·9	99	97·7	97·4	98·7	98	98				
13	H. H.	25	Wound in abd., with protrud. omenL	Reduction &c., Dec. 7th	Convalescent	Dec. 17th	98·8	98	98·6	97·2	97	97						
14	J. R.	28	Charbon on forearm	Excision, Feb. 4th	Cured	Feb. 13th	‡											
15	T. N.	12	Talipes equinus varus	Tenotomy, Jan. 12th	Cured	..	102	102·5	99·7	100·7	100·3	99·4	101·7	101	100·8	99·8°	100°	98°
16	R. W.	48	Stricture of œsophagus	Gastrostomy, Sept. 9th	Died	Sept. 16th	98·8	99·2	99·2	98·3	100·2	97·2						
17	C.	9	Imperf. rect., with recto-vag. fistula	Op. for artif. anus in perin., May 15th	Relieved	..	99	99·6	98·4	98·8	97·8	101·2	98·5					
18	J. S.	33	Ovarian disease	Ovariotomy, Dec. 7th	Cured	..	99·4	98·4	98·6	99	98	98·2	98·2	98	98	99	98·6	
19	C. H.	26	Ovarian disease	Ovariotomy, June 18th	Cured	..	100·4	101·4	100·2	99·6	99·6	99·2	98·6	98·2	98·4			
20	G. S.	51	Prostatic calculi	Median lithotomy, Nov. 12th	Cured	..	98·4	98·6	98·9	100	99	99·2	98	98·4	98			

* Of broncho-pneumonia. † Of kidney disease. ‡ Temperature never rose.

With these hard suggestive facts before us, we may fairly conclude that in one-third of the cases of operation performed in my wards at Guy's Hospital there is no surgical fever after operation; in another third it appears on the day following the operation, to disappear on the second or third day; in one-sixth it appears on the second day, to disappear on the third or fourth; and in the small remainder the temperature may rise for a single day during the first week and then subside. When the temperature remains high for many days consecutively after an operation, the prognosis is bad.

My object in bringing forward the present brief paper has been to disprove the oft-repeated assertion of some British surgeons, that it is after the "spray system," and that system alone, that a non-febrile course of convalescence is met with, and I trust I have succeeded in my intention; but in concluding it, I cannot forget how closely my own figures accord with those of Volkmann[1] who, differing from the assertions of British surgeons, tells us that after some operations performed with true Listerian precautions, one-third will recover without any fever at all, one-third will have moderate fever, and one-third high fever; his proportions being very like my own, except that in his cases the number of instances in which high fever existed was apparently greater than it was in my own. He moreover calls this fever "aseptic," and probably correctly, but I presume I have the same right to use a like term, since in my own cases putrid elements were completely excluded or guarded against, and they rarely if ever existed, and this result was brought about by such simple means as are open to every practitioner in this country.

In conclusion, I would say that I am quite alive to the weak points in this paper, but if it be the means of obtaining from others some absolute well-observed facts connected with the temperatures of patients subjected to operations and treated in different ways, and of raising the question of temperatures after operations out of the region of assertion, and of placing it on the solid basis of facts, my object will have been attained.

ANTISEPTIC NEPHRECTOMY FOR HYDRO NEPHROSIS OF THE LEFT KIDNEY IN A YOUNG CHILD; RECOVERY.

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THE thinness of the abdominal parietes in children renders the examination of abdominal tumours comparatively easy, but the diagnosis is often difficult, if not impossible. The physical signs of different kinds of growth are sometimes so puzzling that they cannot be distinguished. The commonest abdominal tumours in children are enlarged liver or spleen, or hypertrophied mesenteric glands. Rarer growths are ovarian or renal cysts.

As the following case is almost unique, we feel that it is a duty to publish it in full.

A. B——, aged seven, a healthy-looking girl, was admitted into the Dorset-street branch of the Samaritan Hospital, under the care of Dr. Day, on Oct. 21st, 1879, suffering from an abdominal tumour, which was first noticed when she was two years of age. No accurate history could be obtained, as the mother was dead, and the child for the last two years had been away from the father. She had three sisters and one brother living, and they were all healthy. The child had had whooping-cough and scarlet fever, but no bad effects followed either disease. At no period had she complained of any pain or discomfort in her body.

On examination there was an abdominal tumour of irregular outline, and freely movable, rather firm in some places, but elastic in others. It was particularly elastic and prominent between the umbilicus and pubis, where fluctuation was detected. The outline was not unlike that of a large multilocular ovarian cyst, and on deep inspiration it could be seen extending an inch above the umbilicus. The superficial veins were enlarged over the whole abdomen, and there was a considerable quantity of free fluid in the peritoneal cavity. There was no enlargement of the spleen or liver, which occupied their normal position. Traced backwards towards the left renal region, the tumour seemed as though it might spring from the left kidney. A coil of intestine crossed it from left to right crosswise, and then from right to left. Midway between the umbilicus and pubis there was a soft elastic fluctuant swelling to the right of the umbilicus, and between it and the right anterior spine of the ilium the note was tympanitic (cæcum). The lower ribs, especially on the left side, were much pressed outwards, and the percussion note was very resonant over both hypochondriac regions. The girth at the umbilicus was 26½ in.; on the right side it was 12½ in.; on the left, where it was most prominent, it was 14 in. There was no pulmonary or cardiac disease. The urine was normal. It was stated that for a long time before admission the patient had only passed urine once a day, and that the quantity was small.

Many opinions were expressed with regard to diagnosis:—(1) Mr. Spencer Wells thought there was distinct hydatid fremitus in the prominent part of the tumour below and to the left of the umbilicus; he thought it might be removed. (2) Dr. Champneys expressed a similar opinion. (3) Dr. Greenhalgh and (4) Dr. Granville Bantock regarded the case as of ovarian or hydatid origin. (5) Dr. Savage considered the tumour renal. (6) Mr. Thornton also thought the tumour renal, but the question of hydatid of mesentery or omentum ought not to be excluded. He was in favour of a careful antiseptic tapping with a fine trocar in order that the fluid might be examined. (7) Mr. Meredith considered the tumour was due to hydronephrosis, or to hydatid disease; he also advocated tapping with a fine aspirating needle. (8) Mr. Doran thought it an ovarian cyst, with the transverse colon adherent along its upper portion, but was doubtful, and advised an exploratory incision.

Nov. 4th.—The bowels having been freely emptied by an enema, the child was narcotised with bichloride of methylene, and under the carbolic acid spray, Mr. Knowsley Thornton introduced a fine trocar into the fluctuating part of the tumour, midway between the umbilicus and the anterior superior spine of the ilium, when six pints and a half of a brownish-coloured fluid were drawn off, having an acid reaction and urinous odour. The puncture was dressed with carbolised gauze, and a flannel bandage applied.

On the following day the patient passed three pints of clear, normal urine, and the next day forty-four ounces. The general health was undisturbed. After this the quantity diminished to nine ounces in the same space of time, till three weeks before the operation for removal of the cyst, when twenty ounces of clear, non-albuminous urine were passed daily. On the 13th the cyst was fast filling up, and there appeared little doubt that it would be necessary to remove it.

On Dec. 14th the cyst had refilled, and the circumference of the abdomen was again twenty-six inches.

On Jan. 2nd, 1880, the child was transferred to the surgical wards in Lower Seymour-street, and on the following day, bichloride of methylene having been administered by Dr. Day, Mr. Thornton, assisted by Mr. Meredith and Mr. Doran, removed the tumour by abdominal section. An incision commencing an inch above the umbilicus was carried down to its left side to three inches and a half. When the peritoneum was reached it was caught up by artery forceps and carefully divided; the cyst was exposed, and slight adhesions round the tapping puncture were easily separated by the finger, great care being necessary, as the cyst-wall was very thin. The small ovarian tapping trocar was used to empty it, and no difficulty was experienced in performing this part of the operation without the escape of any of the fluid into the peritoneum or over the incision. The cyst was found to be enclosed between the layers of the descending meso-colon, the descending colon having been pushed forward and to the right as the cyst enlarged; the sigmoid flexure was also much displaced, and lay across the lower part of the cyst, and between it and the bladder; the latter was distended with urine, and rose considerably above the pubes. Great care was required in enucleation, which was performed through an opening made in the capsule to the inner side of the descending colon. No distinct ureter could be found, but a thin cordlike structure passed downwards from the lower part of the cyst, and, becoming intimately connected with the parietal peritoneum, was lost in its reflec-

[1] Med. Times and Gazette, June 22nd, 1878.

tion on to the fundus of the bladder. The cyst having been thoroughly enucleated to its base, was turned down, and the renal vein could then be *seen* and the artery *felt* pulsating behind it. A blunt aneurism-needle was passed between them threaded with a double ligature of No. 1 Chinese silk, and they were tied separately about an inch from the aorta. Another ligature of No. 2 Chinese silk was then tied round the whole pedicle on the distal side of the first ligatures, and the cyst cut away a good half inch from the ligatures. There was very little sponging necessary, even in the sac out of which the cyst had been enucleated, and none of the general peritoneum. After the sponging the parts fell very nicely together, so that on looking into the abdomen there was nothing to indicate where the cyst had been removed. Two small shreds of capsule were ligatured and cut away; all the other bleeding points were merely squeezed for a time in Wells' artery forceps. The incision was closed with No. 1 Chinese silk sutures, and the usual gauze dressing without protective applied.

The operation was prolonged by the little patient taking the anæsthetic badly, and retching a good deal, and by the care required in the enucleation. It occupied an hour and a half. From first to last every detail was carried out strictly according to Lister's method. At 9 A.M., half an hour before the operation, the patient's temperature was 99·4°, and twenty minutes after she was placed in bed it was 97·8°, pulse 116, respiration 28. At 11.45 six drops of laudanum were injected into the rectum, and the same quantity again at 2 P.M. At this hour three ounces of clear, pale urine were drawn off by catheter. It was exactly like that examined the day before the operation, and deposited white urates. She was sick at 2, 3.30, 4.20, 4.30, 5.30, 8, 8.30 P.M., and at midnight. At 3.30 P.M. the pulse had risen to 136, and at 9.30 to 150; respiration 32; temperature 101·6° (the highest point reached at any time during the case). At 3.30 P.M. about an ounce of urine was drawn, dusky in colour, and containing some small black clots. From this time till 3 A.M. on the following morning about an ounce was passed without the aid of the catheter every hour and a half, each specimen being bright-red, as if almost pure blood. At 5.30 P.M. a large linseed-meal poultice was applied over the right kidney. At 11 P.M. two ounces of beef-tea were injected into the rectum, with six grains of bromide of potassium; as the little patient was very restless, a similar injection was given every two or three hours during the next thirty-six hours. At 3 A.M., after the operation, rather more urine was passed quite free from blood, and containing urates as before the operation; and from this time onwards a fair quantity of healthy urine, quite free from albumen, was passed, generally from a pint and a quarter to a pint and a half, or more, in the twenty-four hours. During the first twenty-four hours the total quantity, including the bloody urine, was twenty ounces.

The patient was sick at intervals till the morning of the second day, when it ceased, and she began to take bread and milk, and milk and lime-water, freely. After the urine became normal, eight drops of laudanum were given occasionally per rectum, instead of the bromide. At 9 A.M. on the first day the temperature was 98·8°; pulse 140; respiration 26. At 10 P.M., temperature 99·6°; pulse 132; respiration 16. At 10 A.M., second day, temperature 99·4°; pulse 120. At 9 P.M., temperature 100·4°; pulse 114. The bowels moved on the fourth day. All the sutures were removed on the sixth day, when the wound was found well united by first intention. From this time the temperature was normal and the pulse about 96. She was moved into the convalescent ward on the ninth day, and was soon after up and running about. She would have left the hospital for a convalescent home at Brighton on the twenty-third day, but her departure was delayed by an attack of ringworm.

Remarks.—On the day following the tapping the patient passed three pints of urine, and two pints on the second day. This shows that there was some sympathetic irritation of the right kidney. The excessive congestion of this remaining kidney after the major operation may then have been to some extent due to the same cause. The bloody urine was, however, highly charged with carbolic acid, and remained for some days free from putrefaction, while some of the clear urine standing beside it was putrid in twenty-four hours. Both specimens were in similar open vessels, and both were tested from time to time by odour and microscopic examination for bacteria. The ordinary urine was highly offensive, and swarmed with bacteria; the bloody urine got gradually darker in colour, but remained free from odour, and several days later contained no bacteria, but some penicillium.

It seems to us probable that the extreme congestion of the kidney was due rather to the carbolic acid than to the sympathetic irritation. It is obviously difficult to assign to each factor its share, but we know that there is often considerable congestion of the kidneys after ovariotomy, and that this has been decidedly increased in severity since the introduction of Listerism in abdominal surgery.

The cyst was shown at the Pathological Society as a fresh specimen, and we therefore reserve all description of it for the "Transactions." The patient was shown in good health some weeks after the operation, at a meeting of the Medico-Chirurgical Society. The extremely thin condition of the front of the cyst wall seems to us fully to justify our decision that the time for operation had arrived; a very slight accident would have been sufficient to cause extravasation of the cyst contents into the peritoneum.

There are three very important points worthy of special attention:—1. The safety of the antiseptic exploratory tapping, evidenced by the absence of all subsequent constitutional disturbance. 2. The rapid and satisfactory convalescence after so prolonged and serious an operation on a young child, also greatly due to the antiseptic precautions. 3. The speedy disappearance of blood and albumen from the urine after such a severe congestion. The urine was frequently examined during convalescence both by tests and the microscope, and was always quite normal.

ON "WOOLSORTER'S DISEASE."

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THE occurrence of several deaths from "woolsorter's disease" within a short time in Bradford and its neighbourhood, although not unfrequent, has recently excited more attention than usual. This may be owing in part to repeated inquests which have been held on some who have fallen victims to it, and also to the growing public opinion, guided by the local press, that these deaths might easily be prevented.

The following paper, recently read before the Bradford Medico-Chirurgical Society, and since revised, will give an account of the disease as it occurs here, and perhaps assist others in its detection in those towns where wools and hairs are used for manufacturing textile fabrics.

The sorting of wool is generally considered a healthy occupation. The sorting of hairs, which are classed with wools, such as alpaca and mohair, has long been known to be attended with considerable risk to life. During my inquiry into the causes of this, I have found sufficient reason to include with them as similarly dangerous, all wools and hairs which are characterised by being dry, dusty, and more or less filthy from contamination with decomposing animal matter, and particularly if they contain "fallen fleeces" from diseased animals. Among these are, all kinds of alpaca, goat's hair, camel's-hair, low-class East Indian, Persian, and such like wools. The sorting of these is injurious to health: first, from the dust and fine short hairs which arise from them, exciting chronic diseases of the lungs, as bronchitis and consumption; second, from the amount and virulence of poison from decomposing animal matter which is liberated, producing a low form of pneumonia, which I may call septic pneumonia; third, from a specific blood-poison, derived from the fleeces of animals which have died from anthrax, producing the rapidly fatal disease called "woolsorter's disease."

I have tried to ascertain the comparative health of persons sorting different kinds of wool, and find that the annual amount of sickness of the alpaca, mohair, and camel's-hair sorter, is almost double that of the British and Colonial woolsorter.

The number of deaths from diseases of the lungs, excluding phthisis, in the Bradford registration district of males aged twenty years and upwards for the ten years 1851–60, was 17·4 per cent. of the total deaths at these ages. In the Shipley sub-district, where alpaca and mohair are largely used, the proportion for the five years 1872–6 was 68·2 per

cent. This excess of deaths from lung diseases (nearly four to one) does not apply to sorters of wool in other subdistricts where these dangerous hairs are not used.

Alpaca and mohair were introduced into the Bradford district as textile materials about the year 1837. It was not until some years had passed that a suspicion arose among the workpeople that they were injurious to health; this was confirmed by time, and the disease, which could not be accounted for, was found to be confined to the sorters, and became known as "sorter's disease." At places where these materials are used in large quantities, sudden deaths of sorters are frequent. When these occur singly, and at some weeks' interval, little notice is taken of them; when, however, several men working together in the same room die from this mysterious disease within a short time of each other, considerable disquietude and alarm are caused among the workpeople; but only for a short time; the excitement soon subsides, and the work is continued. Men are willing to run the risk without complaint, and submit quietly to what they consider to be inevitable, although scarcely a month passes without the record of some death within the district from this disease.

At various times, eminent medical and scientific men have been consulted by different firms; post-mortem examinations, investigations, and reports have been made over and over again, without satisfactorily explaining its cause and nature, or lessening its frequency. It has now prevailed and been recognised in this neighbourhood about forty years, and notwithstanding all that has been done to prevent it, by ventilation, the use of respirators and other means, it still continues, as severe and frequent as it ever was, overclouding the life of the sorter with a mysterious shadow, and threatening him daily with death.

As years of increased fatality and alarm may be mentioned 1846, when it was first observed at Queensbury by Mr. Corrie of Thornton, and Mr. McLachlan of Shelf; 1853, when reported upon by Mr. William Field and Mr. Samuel Lodge of Bradford; 1854, again by Mr. Field and Mr. Lodge, who published a "Report of the Post-mortem Examination of the body of Henry Clarkson of Queensbury;" 1867-8, at Saltaire, when investigated by Mr. Rhind and Mr. Ellis of Shipley, and Mr. Marsden, F.R.C.S., of Bradford (now of Eastbourne); 1874, at Saltaire, when Mr. Ellis published "A Few Observations on so-called Sorter's Disease," in which are included chemical and microscopical examinations of various samples of hairs and dust, by Professor Frankland, F.R.S.; 1876, outbreak at Queensbury, reported upon by Dr. Britton and Mr. Bramley of Halifax, Mr. Meade of Bradford, and Mr. Boynton Lee (Heckmondwike).

The sorting of inferior, dry, and damaged wools and hairs, if it does not cause illness, produces in most men "difficulty of breathing," "heavy oppression at the chest," "tightness," "dizziness," "alarming drowsiness," "drop to sleep any time," "cough," "sore-throat," &c. These effects are not due to the amount of dust, but are felt more particularly when bad bales are opened which contain fallen fleeces. The discomfort increases as the day advances, so that when they leave work they have little life or energy left, and are glad to get home. Many live several miles from their work, as they think the walk to and from the mill relieves the oppression of which they complain, and has a beneficial effect upon their health.

CASE 1.—R. N——, aged fifty-eight years, married, strong, stout, and healthy-looking; had been a sorter over forty years. His previous health had been good, not subject to cough even in winter, and was always very regular and temperate in his habits. For the last fourteen years he had worked at Saltaire, sorting alpaca, and had resided two and a half miles from his work, walking the distance night and morning. On June 25th, 1877, when he got home he said he had opened a bad bag, and had some very nasty and offensive work. He slept well through the night, was up early the next morning, had his breakfast, and did not say a word about feeling unwell. It was noticed that he perspired much at his work, but did not complain; and although he was not well he continued at his "board" till 10 o'clock A.M., when he left, saying he should fall if he did not go. He had great difficulty in walking home, so complete was his exhaustion. He perspired very much, and went to bed. As his breathing was rather oppressed, a mustard plaster was applied across his chest, and he took an emetic of mustard, salt, and warm water. He continued to get worse, and allowed me to be sent for. When I saw him at 7 o'clock P.M. he was in bed, on his back, perspiring freely. He had not shivered or felt chill; there had been no vomiting, thirst, or pain, tongue moist, slightly furred, and felt cold; some wheezing in trachea, very little cough, no expectoration, respiration 34, expiration prolonged; no dulness on percussion, some dry cooing sounds over right lung posteriorly, no moist sounds, pulse 100, very weak and irregular. Temperature, armpit 97·6°, under tongue 98·1°, within rectum 102·2°. At 11.30 P.M. his aspect was anxious, the face pale, with a slightly leaden hue. He said he felt "very poorly," "completely done," but had no pain, vomiting, purging, cough, or expectoration. No dulness on percussion of chest, respiration 40, laboured, long expiration, considerable dry sounds on right side, no moist sounds; temperature, armpit 96·6°, rectum 102·5°, pulse very rapid, irregular, and uncountable; hands, knees, face, and tongue cold, perspiring freely, mind clear. Urine, specific gravity, 1040. He died three hours afterwards. Duration, seventeen hours. No post-mortem examination.

CASE 2. (Attended by the late Mr. LAWRIE).—J. R——, aged fifty-five years, a sorter of alpaca and mohair at Saltaire twenty-five years, was always healthy, temperate, and regular in his habits. On Jan. 26th, 1876, he worked and ate as usual, walked home after work (two miles and a half), and did not complain of being tired, was cheerful during the evening, read the paper, had some oatmeal gruel, and went to bed at 10 o'clock. He slept two hours, when he awoke and complained of a pain in his back. A hot brick was applied, and after some time he got to sleep again. The breathing was not rapid; he had a slight cough, but not worse than it had been for about a fortnight. During the morning he complained of a pain in his chest, going through to the back, for which, about 9 A.M., a mustard plaster was applied, and a mustard and warm-water emetic given. During the forenoon his breathing was quicker. He had no rigor, pain, thirst, purging, or expectoration, but perspired moderately. At 1 P.M. he submitted to have the doctor sent for. At 3 P.M. he was more restless, his breathing more laboured, and he could not bear the weight of a poultice on his chest. Complexion pale, mind clear, and feet cold. He died at 7 P.M. Duration, nineteen hours.

The cause of death of another case was registered "congestion of lungs; fifteen hours." These are examples of death during the stage of collapse. If not so severe, reaction comes on, and is followed by pulmonary congestion and pleural exudation. These cases are very dangerous, being often fatal within four days. If the patient survives a week he generally recovers.

CASE 3. (Attended by Mr. LODGE, Bradford.)—R. M——, aged fifty-four years, a sorter of camel's hair and Persian wool. Previous health good; occasionally got "fresh." On Saturday, Oct. 27th, 1877, worked as usual. On Sunday did not feel very well, got up, but did not go out; slept well the following night. On Monday got up, and dressed at 11.30 A.M.; felt poorly. During the day he got worse; went to bed again, and was seen by Mr. Lodge's assistant at 3.30 P.M. He had no thirst, nor vomiting; the bowels had been moved, and there was some pain in abdomen; cold perspiration, not much cough or expectoration, but complained of oppression at the chest and great weakness. The symptoms rapidly became more severe; he had no sleep, continued sensible, and died at 8 P.M., before Mr. Lodge could see him. Duration, two days.

CASE 4. (Notes by Mr. LODGE.)—J. S——, aged thirty-seven years, was sorting Persian wool on Feb. 15th, 1877. Mr. Germain, my assistant, saw him on the 16th; I visited him several times daily. On the 17th I find this note:—"8.15 P.M. Respiration 42, pulse 120, weak and uncertain; temperature in the groin, 96°. Recommended application of external heat, and gin with hot water to be given. At 11.15 P.M. the temperature had risen to 99°, but at 3.20 A.M. on the 18th it had fallen again; respiration 38, and somewhat sibilant; thirst extreme. At 10 A.M. some lividity of extremities. He died shortly afterwards. Duration, two to three days.

Post-mortem examination.—February 19th, 8 A.M.: The right side of the chest was full of fluid of a pale straw colour; the left side contained a considerable quantity of sanguinolent serum. Both pleurae were inflamed, also the left lung in patches, most advanced at the base and likewise the bronchial tubes. The heart was somewhat enlarged, and fat; but firm. I searched in vain for any appearance of hairs or dust in the tubes, and a careful microscopical

examination by Mr. Roberts, house-surgeon, Bradford Infirmary, failed to detect in them any foreign matter whatever.

CASE 5. (Notes by Dr. GOYDER, Bradford).—On Sunday afternoon, February 10th, 1878, Dr. McLeish, my assistant, visited T. K——, a woolsorter, who had lately been on "Van" (low-class mohair). His father brought the message, and said he did so on his own responsibility, as his son did not think himself ill enough to require medical aid. The patient was a strongly-built man, who never had any previous illness worthy of mention, and had a good family health history. During the week he had been "out of sorts," and occasionally had spat small quantities of blood, but thought very little about it, and continued his work. He had also taken his part as a cornet player at the theatre the previous night. He was in bed, and complained of cough, difficulty of breathing, and pain across the loins, tongue coated; appetite bad; pulse not indicative of serious disease, although there was some slight dulness posteriorly over bases of both lungs. He passed a restless night. On the following day he was much worse; cough incessant; sputum rusty; breathing difficult; dulness posteriorly well marked, with coarse crepitation over right base. Pains in joints and legs; profuse perspiration. Pulse 130; temperature 104·5°. Third day: Entire absence of pain; dyspnœa increased; sputum bloody; pulse increasing in frequency and diminishing in force and regularity. Temperature 103·7°. Fourth day: Pneumonia progressive, involving the apices of both lungs; dyspnœa increasing; breath excessively foul; almost like what is observed in gangrene of the lungs; pulse 140; temperature 101·5°. He died at 1 A.M., February 14th. Duration, four days.

This case, taken by itself, might be looked upon as a common form of pneumonia due to some specific cause not arising from the man's occupation; but it must be considered in conjunction with the following facts:—He was one of nine woolsorters who worked in the same room, three of them, who had been previously healthy men, and resided miles apart, died within about a month, each after a few days' illness, from apparently the same disease. The room in which they worked is the attic floor of a small warehouse, the ground floor being used for stabling, and the middle one for sorting. It has nine windows on one side, and ten on the other, with ten open fanlights for ventilation. Its capacity is 20,125 cubic feet. Bales of mohair are piled up along the middle of the room, but allowing one-third of the space (the maximum amount) for stowage purposes, 13,417 cubic feet remain for nine men.

CASE 6 (one of the three men above referred to; notes by Mr. MCKENZIE, Bradford).—W. R——, aged twenty-three years, a woolsorter, lately on "Van." On Jan. 21st, 1878, he had worked all day; on the 22nd, not feeling very well, he stayed at home, on the 23rd I visited him. His previous health had been good; he did not complain of anything in particular, but said he felt poorly; had no rigor or vomiting; bowels moved; mind clear; pulse regular and feeble; some cough, with slight frothy expectoration. Examination of the chest did not reveal anything abnormal; indeed, his condition did not present features of any urgency. At my visit the next day I found him pulseless; extremities cold, bathed in perspiration; face and hands livid; breathing accelerated; perfectly sensible, said he felt all right, and wished to be removed to his own home, eight miles off. He was taken in a cab against my advice, and died on the way. Duration, three days.

CASE 7 (another of the three men above referred to, attended by Mr. Whitteron and Mr. Rawson, Low Moor).—Sergeant E——, aged twenty-seven, a woolsorter, never ailed anything before his present illness. He had been a sorter ten years, generally on Scotch and English wools, but during the last three months on grey mohair, "Van," and alpaca. He resided two miles from his work. On Feb. 19th, 1878, when he got home in the evening, he said he was not "half well," and went to bed early. He took some peppermint-tea and whisky, after which he perspired freely.—Feb. 20th: He worked as usual, when he returned home, said he was "right finished," had some tea and whisky, and went to bed, shivered, was burning hot, but did not perspire.—21st: Got up at noon for a few minutes, but felt so weak he returned to bed, and sent for the doctor. He complained of slight pain in the chest, and a troublesome cough. The phlegm was of a yellowish colour, never rusty.—22nd: Pain gone; cough no better.—23rd: Cough left him during the afternoon; had cold perspiration; complained of being "smoored" (overheated, could not get sufficient air).—24th: In the morning said he felt well, and thought he could get up; had no pain or cough. I saw him at 7 P.M. with Mr. Whitteron. His aspect was anxious; cold perspiration; quite sensible; breathing 48; slight rattling of phlegm in trachea; percussion, both sides, front and back, clear. Left lung: moist sounds posteriorly, and at lower part anteriorly; upper part free. Right lung: sounds absent about base posteriorly; mucus râles in front; no vesicular murmur. Heart inaudible; pulse very feeble, uncountable. Temperature, under tongue 96·6°; within rectum 100·6°. Hands and forearms cold, purple; blood stagnating. Died at 11.45 P.M. Duration, five days.

By the courtesy of Mr. Whitteron I was present at the post-mortem examination, made by order of the coroner, sixty hours after death. The body was well nourished; rigidity moderate; sides of chest livid; skin of exposed scrotum and penis of a bright and dark-red colour; under parts of scrotum not discoloured; finger-nails blue-black. The pericardium contained about an ounce of sanguinolent serum. There was a sprinkling of light-coloured thin blood-spots under the epicardium of the left ventricle. Both sides of heart contained dark semi-fluid blood. The auricular septum was of a black-red colour from extravasation. The internal surface of the aorta was of a bright cherry-red colour. Two of the corpora Arantii of aortic valve were black from ecchymosis. Several points of attachment of the cords to the muscular columns of the mitral valve were similarly discoloured. Other parts of heart natural. Each side of the chest contained twelve to sixteen ounces of sanguinolent serum. The lungs floated in water. When cut into the structure appeared very close and full of black blood, but a small portion of the worst part, when removed, floated. No spots of ecchymoses beneath pleuræ, lining walls of chest, or peritoneum, on internal surface of abdominal walls, bowels, and diaphragm. The spleen, kidneys, and mucous membrane of stomach and bowels were not examined. Blood from the heart was added to a solution of sodic sulphate (one ounce to two ounces of water). When settled, the fluid was of a bright ruby colour, indicating change of corpuscles, and partial solution in liquor sanguinis.[1]

(To be concluded.)

ON SOME

PERIODICAL CHANGES WHICH OCCUR IN FIBROID TUMOURS OF THE UTERUS, AND THEIR SIGNIFICANCE.

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(Concluded from page 795.)

CASE 4.—A. H——, aged forty-two, was admitted to University College Hospital in September, 1878. She has been married twenty-three years, and her husband is still living. Her mother died at the age of forty-eight—just "at the change of life." Flooding had occurred on more than one occasion, and after she had recovered somewhat it recurred and "took her off in a single day." The patient began to menstruate in her twelfth year. She was regular every four weeks from the first, the flow lasting four or five days, and accompanied with slight pain. She has had one child at full term. She did not nurse it in consequence of mammary abscess; she has had no miscarriage; she had rheumatic fever when thirteen, and a slighter attack two years afterwards. She had small-pox fifteen years ago, and from that time she has continued to grow stouter. She says that it is now three years since she enjoyed her usual health. She feels tired and is easily fatigued; has a dragging sensation, and a bearing down in the lower part of the abdomen. The periods are irregular, being more frequent and more abundant than previously, and they are accompanied with a gnawing pain. These symptoms have been present for three years. She complains besides of pain in the

[1] Lectures on the Infective Processes of Disease, by Professor Burdon Sanderson, Brit. Med. Jour., Dec. 29th, 1877.

pelvis—worse on the left than on the right side. It is unlike labour pain, and of a gnawing character. The pain is worse when the bleeding is greatest.

When first seen a large tumour was found rising out of pelvis, and reaching nearly to the umbilicus. She was given a hypodermic injection of sclerotic acid. After this she bled profusely. She continued as an out-patient until she was admitted into the hospital in May, 1879. During this time variations in the size of the tumour were noted; but she was seen at irregular intervals only. Occasional injections of sclerotic acid were given, but she got no better.

She was admitted into the hospital on May 15th, and said that the last menstruation began on May 2nd, and lasted till the 12th; very profuse and clotty; she had no serious pain with it, but she had a "waving" sensation in the stomach, with great backache. She added that the swelling in the abdomen was "monstrously large and hard" before the menstrual flow, much more so than it was at the time of examination (four days after its cessation). She complained of sharp pain in the left ovarian region, going through to the back. On palpation, a smooth pyriform tumour was found in the hypogastrium, extending rather more to the left than the right of the middle line of the body. It was freely movable. In the middle line it reached 6½ in. above the pubes; two inches above the pubes it measured 5½ in. from side to side. The cervix of the uterus was hard, large, and longer than usual. Bimanual examination showed the body of the uterus to be large, and harder than normal, and that there was a globular mass in the right border, close to the fundus, causing a large prominence at that point. The uterus with the growth was freely movable. The sound was introduced for nearly five inches, somewhat to the left, so that the prominence which was subsequently found on the left was the fundus uteri, that on the right a fibroid tumour. Hypodermic injections of sclerotic acid were ordered to be given on alternate days.

On the 19th there was a decided increase in the size of the tumour. It reached to the same point in the middle line above the pubes, but it measured 6½ in. transversely. On the 21st it reached 6½ in. above the pubes, and measured 6⅝ in. across. On the 23rd it measured 6½ in. transversely, and reached within ¾ in. of umbilicus. There was some yellow discharge at this time. On May 26th the broadest cross measurement obtainable, which was 2 in. below the umbilicus, was 7⅜ in.; but 2 in. above the pubes the measurement was 6⅝ in. From the top of the pubes to the highest level of the tumour was 6⅝ in. The increase was more noticeable on the right side than elsewhere, so that the asymmetry of the tumour could be made out by palpation alone now; and the parts of the tumour on both sides of the middle line reached higher than the part in the middle line itself; so that on the 26th it was found that the tumour had not increased in the middle line, but on the right side it reached ¾ in. above the umbilicus. The patient complained of various uncomfortable feelings at this time, such as cold shivering in the head, fluttering and throbbing in the hypogastrium; but she had no actual pain. On the 29th the tumour reached in the middle line to the umbilicus, and about ¾ in. above that point on each side. At 8 o'clock in the evening the catamenia appeared, the discharge being pale and scanty. On the 30th the upper border of the tumour on the right side was 1 in. below the level of the umbilicus; on the left it was somewhat lower; in the median line ¾ in. On the 31st it measured 6 in. above the pubes in the median line. The widest measurement across was 5½ in., about the same size as on admission. On June 6th the tumour was within 1 in. of the umbilicus; the broadest measurement was 6 in. The catamenia ceased on June 9th. The loss was much less than usual. After the commencement of menstruation, however, there appeared little or no diminution in the size of the tumour. Since her discharge from the hospital the catamenia have been regular, and not excessive.

This case is valuable, inasmuch as the transverse measurements were taken, and the increase and diminution in them are not subject to any objection that may be taken to the vertical measurements.

CASE 5.—M. T——, single, aged thirty-six, became an out-patient of University College Hospital in June, 1879. It was noted then that she had a fibroid tumour reaching to within three fingers' breadth of the umbilicus. During the time the hospital was closed she said the uterus had been dilated with tents, with a view to the removal of the tumour, but this was not found possible. She became an in-patient of University College Hospital on Dec. 2nd. She was born in the country, but had lived in London as a servant for the last eleven years. She had not had any serious illness except "low fever" about fourteen years ago, after which she was very weak, but she soon picked up her strength, and never again complained of weakness until three years ago. She began to menstruate about sixteen, and was until her present illness regular "to the day." The flow was moderate, and used to last three or four days, with some bearing-down pain. Five or six years ago the flow began to increase in quantity, became very profuse, and lasted a week or more. It was also clotty. Lately it has become still more abundant; the last two or three periods have lasted a fortnight, the discharge being more profuse during the first few days. She had but slight bearing-down pain with it, but she complained of pain in the side at the margin of the ribs, of nausea and sickness, especially at the menstrual epochs. She was very anæmic though stout. The heart and lungs were healthy, but the heart's impulse was very feeble, and the pulse small and compressible. In the hypogastric region was felt a smooth, hard tumour rising out of the pelvis, almost median and symmetrical, but, if anything, larger on the right side. It had the shape of the enlarged uterus, it was not tender or lobulated, it was freely movable and dipped down into the pelvis and reached upwards to within 1⅞ in. of the umbilicus. On vaginal examination the cervix was found long, softish, and the os patulous. The upper part of the pelvis was filled by a hard, smooth tumour, continuous with the cervix, larger on the right than the left side, movable and not tender. The sound entered 3⅝ in., and a little to the left of the middle line; its introduction gave no pain. This was on Dec. 3rd, and the last menstruation ceased Nov. 28th.

On Dec. 5th the distance between upper part of tumour and umbilicus was 1 in. On the 11th it was also 1 in. On the 14th the tumour reached to the umbilicus. On the night of the 14th menstruation set in. The flow was not profuse, and she had less pain in the abdomen. The patient had been complaining of pain in the belly for a week. On the 15th the tumour reached within 1½ in. of the umbilicus. This was about twelve hours after the flow began. On the 16th the flow was very profuse. A hot-water bag was applied to the lumbar region, and the discharge became very much less. The use of the bag was continued during the period. On the 19th the patient felt faint and the discharge became again profuse. After this the discharge diminished in quantity, and ceased on the 22nd. From the 15th to the 20th the distance from the upper border of the tumour to the umbilicus was 1½ in. On the 22nd it was ½ in. The observations of the case during the next fortnight were not carefully made or recorded, but it is noted that the distance was 1 in. on Jan. 1st, and 2 in. on the 12th, and that menstruation began on the 15th, that it was very profuse, and that the patient felt faint and complained of dragging pains in the pelvis. She was ordered hot-water vaginal injections twice a day, but they were only used for a few days, and hypodermic injections of sclerotic acid twice a week. On the 16th the flow was less and the fundus reached the umbilicus. On the 21st the distance was 2½ in., and the discharge had almost ceased. The loss during this epoch was much less than during the previous one.

On Jan. 25th, the distance between the upper border of the tumour and the umbilicus was 2½ in. On the 26th, the distance was 1⅞ in. On the 27th, the distance was 1 in. On the 29th, the distance was 1 to 1¼ in. On Feb. 2nd, the distance was ½ in. On the 4th, the distance was nearly 1 in. On the 5th, the distance was ¾ in. On the 6th, the distance was 1½ in.; tumour much harder than usual. On the 7th, the distance was 1½ in. On the 8th, the distance was ⅞ in. On the 9th, 9 A.M., the distance was about ⅞ in.; at 9 P.M. the distance was 2¼ in. An injection of sclerotic acid was given after making the last measurement. The patient says that she thinks the tumour is always smaller in the morning about 7 A.M. On the 10th, at 10.30 A.M., the distance was 1 in. On the 11th, at 11.30 A.M., the distance was 1 in.; at 10 P.M. ⅞ in. The nurse and patient state that the tumour was smaller this morning after a copious stool than it was last night. On the 12th, the distance was, at 10 A.M., 1 in.; at 9 P.M., 1½ in. On the 13th, at 10 A.M., the distance was 1 in. I thought on the 12th that the tumour enlarged and diminished during examination. There was no question of this on the 13th; for while the hand was on the tumour it decreased and became harder until the upper border was rather more than 2 inches from the umbilicus, and it relaxed

and increased until the upper border was about 1 inch from the umbilicus. On the 13th, at 8.30 P.M., the distance from umbilicus was ¾ in. On the 14th, at 10 A.M., 1¾ in.; at 4 P.M., 1½ in.; at 9.30 P.M., 2 inches. Patient began to menstruate at 8 this morning, but the flow was extremely slight until 8 P.M. On the 15th, at noon, the distance from umbilicus was 1 in. The tumour was markedly tender; patient has had colicky pains all the morning; the flow was rather free. At 11 P.M. the distance from umbilicus was 2 in.; the tumour was harder than usual. On the 16th, at 10 A.M., the distance from umbilicus was 1¾ in.; the flow was profuse. On the 17th, at 4 P.M., the distance was 1¼ in.; at 9 P.M. 2 inches. On the 18th, at 2 P.M., the distance was 2 inches. I am able to give these figures through the assistance given me by the resident obstetric assistant at the hospital, Mr. Dawson Williams, M.B., who watched the case carefully, and took most of the measurements. No hypodermic injection was given after the 9th until the 17th, but owing to the profuse flow one was then administered.

The variations in the size of the tumour in this case are somewhat curious, and are, perhaps, partly dependent on the use of sclerotic acid, but yet many of them appear to be independent of that. The tumour appeared to increase somewhat in size during the nineteen days following the cessation of the flow until Feb. 9th, five days before the appearance of the next flow, when a sudden decrease of 1½ in. took place in it; then the tumour again increased in size and reached to a distance from the umbilicus varying between ¾ in. and 1½ in. until the day on which the catamenia appeared, when the tumour diminished and the distance increased to 2 in. The contractions of the organ were also observed and measured just before menstruation; they were well marked.

The number of cases recorded in this paper are few, and only sufficient to point out that some very interesting and important changes do occur periodically in some fibroid tumours of the uterus. The number is not sufficiently large, and the cases have not been observed with sufficient detail, nor for a sufficiently long period, to throw light upon a number of questions that one would like to have answered. There are, however, some remarks I wish to make upon these cases.

The tumours were all of such magnitude as to have ascended out of the pelvis, and to have occupied the abdominal cavity in part. Observations could not be made with such care and accuracy in such growths when small and occupying the pelvis as when large and projecting above the pelvic brim; indeed, such observations may be impossible in the former conditions. I endeavoured to discover by weekly examinations if any changes occurred in one case in which the tumour was small, and in the pelvis, but I was unable to arrive at any conclusion.

The tumour was in each case lodged in the wall of the uterus; it was in no case pedunculated, though in two of the cases it formed a distinct prominence under the peritoneum on the outer surface of the uterus. In the other three the whole of the posterior wall of the body of the uterus seemed to have been involved in the growth, so that the organ appeared to be symmetrically enlarged when examined bimanually. I do not know whether subperitoneal fibroids undergo monthly changes or not, but they do alter during gestation. In one case in which a fibroid about the size of a small walnut was found on the right side, attached to the uterus by a pedicle so short that it might almost be characterised as sessile, I found that it increased in size as gestation advanced, and about the seventh month it could be felt to the right of the umbilicus spread out like a softish cake about the size of the palm of the hand. Some weeks after her confinement the patient came to see me again, and I found the tumour, but it was smaller than when I examined her first, about the third month of pregnancy, and in the course of a few weeks I could find no trace of it.

The next point common to all the cases is that there was in all of them profuse hæmorrhage. In three there was menorrhagia, and in two metrorrhagia. Whether the changes occur in cases in which there is no hæmorrhage, or where menstruation remains unchanged or is absent, or after the menopause, I cannot say. I have had opportunity of examining one case only in which menstruation had remained throughout unaltered. It was in private practice, so that I could not see her as often as is necessary to observe the case fully. She was thirty-six years of age, was and had always been regular in time and amount. She had a large irregular-shaped fibroid reaching to the umbilicus. I saw her every week for a month, but could find no change in the size of the tumour.

The amount of the change seems to vary somewhat in different cases. In one case the variation was not accurately measured. In one case it was 1 in. in the vertical measurement; in two, 1½ to 1¾ in.

The transverse measurements were made in one case only, and in that the variation was nearly 2 in. The probable explanation of this variation appears to be the difference in the density and seat of the tumours. The densest and hardest changed least. In the case in which the transverse increase was so marked, the tumour was lodged in the right border of the uterus, a position favourable to such a mode of enlargement. Two of these cases (3 and 4) show more than the enlargement of the fibroid; they show also the enlargement of the uterus, for the tumour projecting beyond the surface of the uterus formed a prominence separated by a depression from the fundus of the organ. It was found in these cases that the body of the uterus enlarged and diminished again with the increase and diminution of the tumour. In one of these cases the variation in the length of the uterine canal was found to be one inch.

It is generally believed, and indeed there is no doubt, that the uterus enlarges and diminishes in some way in connexion with menstruation. The belief has been that the enlargement takes place in consequence of congestion occurring at or about the menstrual epoch, and that it disappears after the flow has ceased, and in consequence of depletion. There can, I think, be little doubt that the alternations in size which occur in the uterus subject of fibroid tumour is only an exaggeration of the alternation taking place in the healthy organ; and if this be admitted, it appears pretty certain that the view of menstruation which has hitherto been accepted is not correct. The supposed period of rest—the intermenstrual interval—is no period of rest at all; but, on the contrary, one of active growth, for the enlargement does not take place during the flow, but during the interval. The increase can be noted in favourable cases as early as a week after the cessation of the flow, and then every third or fourth day until it ceases. It is difficult to determine when the decrease takes place, whether before, with, or after the appearance of the flow.

In all the cases it had taken place before twenty-four hours, in some before twelve had elapsed after the appearance of menstruation. In one it had occurred nine hours before, and in one uterine contractions were noted three days before the flow appeared. It is not to be inferred that in any of the cases the decrease began after the appearance of the flow, but simply that the cases were not watched with sufficient assiduity to determine the exact time it happened. In the two cases in which the decrease was observed before menstruation began, some decrease took place during the process also.

The question naturally arises, What part does this decrease play in the menstrual process? I believe it is in part the cause of the hæmorrhage, because in all the cases it took place at the beginning, and not at the end of the flow, and it remained practically unaffected by the quantity lost. It matters not whether the flow was scanty or profuse, the diminution in size took place just the same. It seems to me that the decrease depends upon contractions of the uterus and tumour, and the course of events to be the following:—Contractions of the uterus and fibroid, expulsion of the blood from their vessels into the plexuses of the pelvis, the vessels of the broad ligament and the decidua, giving rise to the appearance of congestion, which has been described as present during, and the cause of, menstruation. The rush of blood into the vessels of the decidua causes them to burst and menstruation follows.

The clinical value of the changes described cannot now be estimated; the data are insufficient. The careful observation of pelvic and abdominal tumours, as well as of a large number of cases of fibroids of various kinds, is necessary before any trustworthy conclusions can be arrived at.

DEATH FROM EATING MUSSELS.—A girl, seven years of age, whose parents reside in Sinclair's Close, Port-Glasgow, gathered some mussels from the quay on the 22nd ult., had them boiled, and ate them. On the following day she suffered from severe vomiting. Medical aid was sent for in the evening, but the doctor just arrived in time to see the child die.

COTTON-WOOL AS A VEHICLE FOR MEDICATING THE NASAL REGION.

By EDWARD WOAKES, M.D.,
SENIOR SURGEON TO THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST.

DISEASES of the nose and post-nasal space have of late attracted a considerable share of attention, but scarcely perhaps so much as they deserve, considering the troublesome nature of the affections to which these regions are obnoxious, and especially how frequently in this climate they become the seat of chronic mischief as the sequence of ordinary catarrh. A great difficulty in dealing with such cases has been the want of a satisfactory means of applying medicaments to the post-nasal region with any prospect of maintaining them in contact with the diseased surfaces. The numerous washes, lotions, vapours, &c., respecting the application of which much ingenuity has been displayed, share alike in this respect, that their action is so temporary as to effect little more than a cleansing and disinfecting influence. Irrigation, however, in one or other of its forms will always play an indispensable part in the treatment of nasal and post-nasal diseases, for until incrustations and decomposing accumulations of muco-pus have been removed through its agency, little result would follow from more permanent applications.

Attempts have been made to overcome the difficulty of topically medicating these regions by mixing the drugs selected for the purpose with a gelatine basis, and introducing these in the form of conical-shaped bougies. Patients using them complain of the annoyance caused by their undergoing solution and trickling down the pharynx, producing cough and disturbance of rest. Nevertheless they have served a good purpose, and are still used by some practitioners. The insufflation of powders or medicated snuffs is sometimes adopted, but practically all these measures are insufficient for the purposes in view.

About three years ago, wishing to secure a better method of applying iodoform to the locality in question, I suggested its diffusion through cotton-wool in definite proportions. Pellets of this *iodoform wool*, introduced through the anterior nares, proved an efficacious mode of using the drug, and the practice has been extensively followed. It can be retained the required length of time without annoying the wearer, who is for the most part unconscious of its presence; it is removed when the douche is used. Encouraged by the success of this attempt, and aided by Mr. Bullock of Hanover-street, who perfected the preceding preparation, I have since adopted the method of diffusing a number of other drugs through cotton-wool for use in the nasal and post-nasal regions.

The method of applying medicated wool to the post-nasal space is very simple, and can be improvised under almost any circumstances. It is as follows. The quantity of wool determined upon, usually from two to three grains by weight, is twisted spindle-shaped, but loosely, upon a piece of thread or silk; the thin ends are brought together, and tied with a knot; thus the spindle-shaped pledget of wool is doubled upon itself, and secured firmly to the thread, having now a pear-shape, the stalk being represented by the thread. A blunt probe is engaged in the wool, and made to conduct it along the floor of the nose to the spot where it is to be retained. The process is then repeated on the other side, the threads from each pledget hanging out from either nostril. These are now tied together below the septum, by which means the patient will be assured the wool will not be swallowed. In the morning, supposing the application to be made overnight, they can be withdrawn by pulling on the threads. In this way any drug that may be selected can be introduced with ease, and with a little skill in the manipulation the vault of the pharynx, Rosenmüller's fossa, or the neighbourhood of the Eustachian tubes, may be topically medicated. If desired, several such pledgets may be introduced in succession, until a sufficient quantity has been placed *in situ;* the threads belonging to all can then be tied together, and secured.

The above process is so simple that I ought perhaps to apologise for dwelling on its details. It has, however, a practical bearing, inasmuch as it enables the patient to see for himself that the wool is withdrawn.

There are other advantages attending this use of medicated cotton-wool irrespective of the special virtue of the drug employed. Thus it absorbs discharge, and where necessary disinfects it. Further, when placed in the nasal meati (for which purpose it is unnecessary to attach it to a thread, as it will remain where it is placed), it exerts a beneficial mechanical support to the erectile-tissue-like arrangement of the vessels supplying the mucous membrane of the turbinated bones. It is this peculiar vascularity of the part which admits of the great swelling and profuse discharge often seen to occur quite suddenly in some patients. When the vessels of this structure have been repeatedly congested, their tendency is to remain permanently swollen, and against this issue the pressure exerted by the cotton-wool affords a curative influence, quite irrespective of the therapeutic action of the drug with which it is charged.

As my object in this communication is not to write a treatise on nasal therapeutics, but simply to place in the hands of the profession a ready method of carrying into effective practice the remedies they may themselves select, the further object of this communication will be answered by a brief statement of the formulæ of proved efficacy for the purposes in view.

Besides the iodoform wool already some time in use, the following will be found of most frequent utility:

ASTRINGENTS.

Perchloride-of-iron Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. fer. perchlor., one ounce.

Tannin Wool.—Cotton-wool, one drachm; glycerine, ten minims; tannin, one drachm; rectified spirit, six drachms.

Alum Wool.—Cotton-wool, one drachm; glycerine, ten minims; alum, half a drachm; water, one ounce.

Rhatany-Kino-Catechu Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. catechu, vel kino, vel rhatany, one ounce.

Hamamelis Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. hamamelis, half an ounce.

ANTI-CATARRHAL.

Cubebs Wool.—Cotton-wool, one drachm; glycerine, ten minims, tr. cubebæ, one ounce.

ANTISEPTIC, DISINFECTANT, AND STIMULANT.

Camphor Wool.—Cotton-wool, one drachm; glycerine, ten minims; æth. rect., one ounce.

Boric or Boracic Wool.—Cotton-wool, one drachm; glycerine, ten minims; boric acid, one drachm; sp. vin. rect., six drachms.

Iodine Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. iod., half an ounce.

SEDATIVE.

Opium Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. opii, half an ounce.

General directions.—Mix the glycerine with the tincture or other solvent, saturate the wool with the liquid, and dry.

Since writing the above, I have had some preparations of salicylic and carbolic acid made on the same principle, but have as yet no experience of their usefulness to report.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SUPPURATIVE MENINGITIS AND ABSCESS OF THE BRAIN; REMARKS.

(Under the care of Mr. FIELD.)

S. G——, aged eighteen, an under-gardener at Goodwood-park, was admitted on Jan. 24th, 1880, with a purulent discharge from the right ear. He walked into the hospital, and stated that he had had a discharge from the ear for sixteen years, following scarlet fever. He had no paralysis

of any kind, but complained of pain in the head. Eight leeches were applied around the right ear, with the immediate effect of relieving all pain. Iodide of potassium mixture was prescribed, and the ear was ordered to be syringed four times a day with a weak carbolic acid lotion.

Three days after admission, the house-surgeon was called to him, but the patient died very suddenly before he arrived.

The following are the notes of the post-mortem examination, which was most carefully made by Mr. A. J. Pepper:—There was suppurative meningitis over the petrous part of the right temporal bone, and in the posterior fossa of the skull, above the tentorium cerebelli, and also to a slight extent in the cerebellar fossa. Over the outer part of the petrous bone was a layer of pus between the dura mater and the bone. The dura mater over the bone was in a sloughy condition over a surface the size of a horse-bean. The inner surface of the mastoid bone, where it enters into the formation of the lateral sinus, was of a blackish-grey colour, and the bone here was so soft as readily to allow of penetration. For the same extent the sinus itself was occupied by a very firm thrombus, partly black and partly of a yellowish-brown colour. The internal auditory meatus was healthy. There was a thick layer of puriform lymph on the under surface of the posterior half of the right temporo-sphenoidal lobe of the brain, and on the inner surface of the occipital lobe. There was an abscess, with dirty-grey, sloughy, and purulent contents in the right hemisphere of the cerebellum, external to the corpus dentatum. It was of the size of a large walnut. The brain substance generally and its membranes were congested. There was a slight excess of clear ventricular fluid. There was no disease of the arteries, nor thrombosis of the superficial or internal veins. The membrana tympani had disappeared. There was some pus in the external auditory meatus. The site of the natural petrous and mastoid cells was occupied by an irregular cavity, which contained blackish-grey, purulent matter, and around this the bone was softened and reddened for some distance, evidently from progressive caries. The tympanum was filled by a yellow caseous matter, which blocked the Eustachian tube. No trace of the incus or stapes could be discovered; the malleus was loose in the cavity, and its head was carious. The chorda tympani nerve could only be traced for a short distance after entering the tympanum. The vestibule was occupied by soft caseous matter, which under the microscope was seen to consist of fat granules, and shrunken and flattened epitheloid cells. The cochlea, semicircular canals, aqueduct of Fallopius, and carotid canal were healthy, and the facial nerve appeared uninjured.

Remarks by Mr. FIELD.—The diagnosis of abscess of the brain is notoriously uncertain, and the above case is a good example of the sudden manner in which it is frequently revealed. It appears clinically under many aspects, and that we may the better be able to appreciate the significance of the symptoms which exist, it will be well to glance briefly at the pathology of the disease. Its causes are various, and the symptoms it gives rise to vary with the cause. It has been stated by pathologists that abscess of the brain is never a primary affection, and this fact may be now taken as well established. In all cases, therefore, in which we meet with cerebral abscess after death, we should never feel content till we have obtained evidence of past or present suppuration in some other portion of the body, and it may be in any part. The abscess of the brain may present itself in various stages, as either a patch of red-coloured acute softening, which has not got broken down to form an abscess; as a ragged cavity, with grey, soft, and irregular walls, containing pus, which may be more or less discoloured, the change in either case being an acute one; or, finally, it may appear as a well-defined cavity, with tough and fibrous walls, which contains a green-coloured, opaque, fluid resembling pus, but which on examination may be found to contain no pus cells, they all having undergone fatty and granular degeneration. It may also contain cretaceous material.

These abscesses are usually single, and occur most commonly in the posterior part of the brain, and out of the way of the motor tract; paralysis is, therefore, but rarely associated with them; they affect the white matter rather than the grey, most frequently that of the posterior part of the middle lobe, the posterior lobe or the cerebellum; occasionally they occur in the corpus striatum or pons. Broadly speaking, we may say that the more acute forms of the disease give rise to the signs usually attributed to meningitis or encephalitis, while the more chronic ones give rise to no symptoms whatever until the abscess extends sufficiently near the surface of the brain to light up an inflammation of the membranes, this being the usual mode of termination. Numerous cases have been recorded, in which there can be little doubt but that the condition has existed for months, or even years, before death, without giving rise to a single indication of cerebral disease. Occasionally abscesses are found in the brain after death, which have never given rise to any cerebral symptoms during life, and would probably never have done so, had life been prolonged for an indefinite period. Appearances have been described which suggest that such abscesses sometimes recover; the pus, it has been said, undergoes fatty degeneration, and becomes quiescent, the fat is reabsorbed, the fibroid sac shrinks and gradually contracts upon a cretaceous residue. On the other hand, cerebral abscesses have been known to penetrate the skull and open externally, forming a hernia cerebri. By far the most common cause of abscess of the brain is disease of the middle or internal ear producing necrosis of the temporal bone; this has been said to account for about one-third of the cases. The circumstances under which it occurs from this cause are various, but they vary between two chief types; in one there is extensive disease of the bone, with pus below the dura mater, and frequently thrombosis of one or more of the venous sinuses in connexion with the petrous bone. The dura mater itself is thickened, and the arachnoid and pia mater adherent over it; the brain tissue in the immediate neighbourhood is more or less inflamed and softened, and the abscess is near the surface; it is commonly found associated with a general meningitis. These cases give rise to symptoms during life, the symptoms being those of meningitis or encephalitis; their duration is uncertain, usually not less than ten days, frequently some weeks. It is to this group that the present case belongs; and considering the character of the lesions, the duration of severe symptoms was remarkably short. The cause in such cases is evident, either in the extension of the inflammation by contiguity of structures, or in thrombosis of the veins passing backwards into the cerebral substance. In the other type of abscess from ear disease the relation of the two conditions is more obscure; here is, perhaps, very slight necrosis of the petrous bone, which is found with difficulty, no adhesions of membranes, and perfectly healthy cerebral tissue intervening between the abscess and the surface of the brain; the veins, moreover, are not thrombosed.

It is hard to say how these abscesses are produced; that they are secondary to the disease of the petrous bone it would be impossible to deny, but by what means the materies morbi is conveyed from one place to the other we have at present no evidence to show, although the assumption naturally is that some infective material is conveyed either by lymphatics, arteries, or veins. But it is difficult to trace the connexion between these conditions when the distance is so short; still more difficult is it to do so when the abscess is secondary to some collection of pus in other parts of the body, such as an empyema, an ischio-rectal abscess, or one in the shaft of a long bone. It is not a little remarkable that the brain, unlike all other organs, should be liable to the deposition of these secondary abscesses, and that without any signs of a general pyæmia. These, of course, cannot be strictly compared to the secondary abscesses occurring in the liver, for in this case the peculiar blood-supply affords a ready explanation. These abscesses are much more chronic in their nature than those previously described. It is these which often give no signs during life; if rather more acute, they may terminate by exciting a meningitis when they approach the surface, which is always suppurative and very severe. In this form death occurs in a very short time from the appearance of the first symptom, although the abscess may have existed for months.

We find abscesses of the brain having the same pathological and clinical history as these two types, or intermediate between them, resulting from disease or injury of the nose, eyes, skull, scalp, or face, or from operations upon these parts. The cerebral symptoms which arise after injuries to the head may be due to abscesses connected with the dura mater, or to such abscesses of the brain as have been described; it is often impossible to distinguish between them clinically. It should be remembered under all these circumstances cerebral symptoms may arise, which would seem to indicate the existence of abscess or meningitis, but that these symptoms occasionally clear up, and the patient

makes a good recovery; in all of these cases our prognosis should therefore be most guarded.

Abscesses of the brain occur occasionally as a result of a general pyæmia; in these cases the abscesses are usually multiple and small. Finally, it is said to result from embolism of one of the cerebral arteries. In this case it is usually associated with sudden paralysis and the usual symptoms of embolism, followed by headache, and sometimes more or less marked signs of encephalitis. Red softening is more frequently found associated with these symptoms. Occasionally this has broken down and formed an abscess, or rather the softening has been so diffluent that it almost justified the name of abscess.

DONCASTER INFIRMARY.

DOUBLE CONICAL CORNEA, OCCURRING DURING PREGNANCY; EXCISION.

(Under the care of Mr. J. B. WITHINGTON.)

THE following case would appear to come under the category of diseases of the eye occurring in connexion with pregnancy, referred to by Mr. Henry Power in his interesting paper lately published in THE LANCET. It was brought under the notice of the Doncaster Clinical Society some months ago, and was at the time attributed to the general condition of anæmia and exhaustion dependent on pregnancy and lactation, from which the patient was suffering. The results of the method of operating compare favourably with those obtained by trephining, both as regards the absence of adhesion of iris and ultimate vision, probably on account of the more perfect apposition of the edges of the wound in the oval than in the circular incision.

Mrs. G——, aged twenty-three, was admitted into the infirmary on May 3rd, 1878. She had an infant eight months old, which she had suckled almost up to the time of admission. During the later months of her pregnancy she noticed her sight becoming gradually worse, and about a month before admission, she perceived an undue prominence of cornea. She was a pale, anæmic, spare-looking woman. Both eyes presented marked conicity of cornea, the most prominent part being opposite the centre of the pupil. The right cornea was opaque and nebulous at the apex; the left was clear.

On admission the sight was exceedingly dim in the right eye, with which she could with difficulty read Snellen No. 20 at three inches; with the left she read Snellen 20 at ten inches. She was unable for some time before admission to see her way about out of doors. Atropine was dropped daily into the eyes and iron and strychnia were given internally. On May 15th an oval piece of cornea was removed with a fine Graefe's knife from the apex of cone of the right eye one-eighth of an inch in length and one-twelfth of an inch in width. The knife was directed from above downwards, the small flap was raised with a fine pair of forceps, and excised. After the escape of the aqueous humour the edges of the wound fell into close contact with each other. Atropine was dropped daily into the eye, but the eyelids were not opened until forty-eight hours after the operation, when the eye was found to be quiet and clear. The aqueous was retained and the pupil was well dilated.

On May 25th a similar operation was performed on the left eye. On examining the eye forty-eight hours after the pupil was found contracted and the aqueous escaping; but by keeping up firm pressure for a few days with a compress bandage, complete union of the cornea took place without any adhesion of iris. The immediate effect on her sight of the operations was noticed by the patient, who was able to read a book of rather large type before leaving the infirmary early in June.

On May 20th, 1879, she read No. 1 Snellen at five inches with nearly equal facility with both eyes. She read No. 2 Jäger at six inches with the right eye, and No. 4 at four inches with left eye. She could do ordinary needlework without difficulty. There was scarcely any opacity of the right cornea, but there was a small leucoma in the left, on account of which it may be advisable at some future time to perform an iridectomy.

When last seen there was no return of the conicity. It is probable that the original cause of the disease is to be found in the debility and exhaustion caused by lactation in an already anæmic person.

As regards the relative advantages of excision of oval flap and trephining, with special reference to the danger of adhesions of iris, it may be doubted whether the operation chosen is not of less consequence than subsequent care and attention.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Encephalocele.—Extra-uterine Fœtation.

AT the meeting on May 5th, Dr. Playfair, President, in the chair,

Dr. GODSON showed photographs and a cast of the head of an infant the subject of a large Encephalocele. Nearly half of the brain was contained in a sac outside the cranium, a very narrow peduncle, passing through the anterior fontanelle, connecting it with the portion within the skull. The head with the tumour resembled an hour-glass. The child lived a month, and had never cried. It had no convulsions till just before death.

Dr. BRAXTON HICKS, in some observations on Recording the Fœtal Movements by means of a Gastrograph, called attention to two notes published in the Proceedings of the Royal Society for March, 1879, entitled "On the Auxiliary Forces concerned in the Circulation of the Pregnant Uterus in Woman," and "On the Supplementary Forces concerned in the Circulation of the Abdomen in Man." In the present paper tracings were brought forward taken from the abdomen by means of an instrument like a cardiograph and a polygraphic cylinder. Fœtal movements of two sorts were shown: (1) sudden kicks, shown by sharp marks indistinguishable from movements of the maternal limbs; (2) slow turnings about *in utero*, shown by a gradual elevation of the line of wave for some distance. Both kinds of marks were superposed upon the respiratory waves.—Remarks were made by Dr. Edis, Dr. J. Williams, and Dr. R. Barnes, and Dr. Hicks replied.

Dr. BRAXTON HICKS then related a case of Extra-uterine Fœtation about the Seventh Month of Pregnancy; Sudden Urgent Symptoms; Removal of Fœtus by Abdominal Section. The patient, aged twenty-nine, married ten years, had had two children, one seven years, the other four years since; no miscarriages. In April, 1879, she was taken with severe vomiting and abdominal pains, for which she was kept in bed a month. After getting up she said that her womb came down. In July she was admitted into Guy's Hospital, under Dr. Galabin, and then thought herself about six months pregnant. Only the fact of pregnancy, together with a swelling behind the cervix, was then made out, and she shortly left the hospital. In the first week of August she was readmitted under the author, in the absence of his colleague. A tense enlargement then extended on the right side three inches from the middle line up as high as the umbilicus, whence it rose nearly to the left ribs, towards the flank, and extended downwards, filling the whole left hypogastric region. This evidently contained a living fœtus. A so-called "placental bruit" was heard over the centre of the abdomen, below the umbilicus. The cervix protruded through the vulva, the external os was patulous, so that the finger could reach the internal os, which was closed. The sound could not be carried into the uterus beyond the unimpregnated length. For greater assurance he had a sponge tent introduced into the uterus, but nothing was found within but some fragments of decidua. At the end of a week she was suddenly taken with increased pain and distension of lower abdomen, shortly followed by collapse and pallor, pulse rising to 140, thready; temperature normal. She said that while sitting by the side of the bed she felt something give way in her lower abdomen, upon which the fœtus kicked violently, and then she became faint, and shortly after the movement ceased entirely. Three hours later the author found her in great distress from the tension; saw that evidently blood had been effused internally, and decided to operate, as her only chance for life. This was done under carbolic spray, the incision being made in the median line, which had now become the most prominent part. A cavity was opened containing a large quantity of dark

watery blood, which had evidently been effused within the placental area, and had been the cause of the symptoms. After its escape the chorion was ruptured, and the lifeless fœtus, about the size of a large six months' normal fœtus, extracted. Not much more blood flowed, and the wound was closed, except an opening an inch and a half long. The patient, however, began to show signs of sinking, and died shortly after. At the autopsy it was found that the placenta extended up the abdominal wall in front almost to the umbilicus, and was not attached to the uterus or bladder. The sac was adherent in all directions to the intestines and other parts. Its lowest portion was attached in front of the uterus and behind the bladder. On the anterior surface of the uterus was a pedunculated fibroid, as large as a walnut. The right Fallopian tube, firmly bound by adhesions, crossed the anterior surface of the uterus, and was attached to the lower surface of the fibroid, terminating in some loose tissue under the placenta. The right ovary was adherent to the right side of the amnial sac, and contained a large corpus luteum. The author remarked that the case was the analogue of concealed accidental hæmorrhage in normal pregnancy—that it was a clear case of true ventral pregnancy. He thought that carbolised sponges might be kept within for a time, and a compress maintained, since rigid antiseptic treatment would be impossible.—Dr. WILTSHIRE thought that there was no doubt that abdominal pregnancy did occur, and instanced a case of Kœberlé's in which, after ablation of an inverted uterus, pregnancy ensued by means of a fistulous opening at the top of the vagina; also one in which the roof of the vagina was ruptured by forcible coitus. He thought that in the present case, as an exception to the general rule, it might have been preferable to remove the placenta.—Dr. ROUTH thought that if the position of the placenta had been made out by auscultation, the incision might have been made away from the median line, and wounding the placenta avoided. He also asked why Dr. Hicks did not, in preference to performing gastrotomy at all, aspirate the sac, or kill the fœtus by injecting morphia into the amnial cavity. The separation of the placenta seemed to have been caused by the fœtal movement. —Dr. GERVIS mentioned a case in which he had performed primary gastrotomy for extra-uterine fœtation. Not much difficulty was met with, and but trifling hæmorrhage, the position of the placenta being mostly in the pelvis. But the patient died in about three days as the result of a continuous hæmorrhagic loss through the drainage-tube. The autopsy showed no sign of peritonitis, but separation of the placental margins.—The PRESIDENT was surprised to hear Dr. Hicks say that perfect antiseptic treatment was impossible, and thought that the chief hope of progress in such cases lay in carrying it out completely, however difficult it might be.—Dr. J. WILLIAMS thought that the insertion of a tent into the cervix was superfluous for diagnosis, and that it possibly had something to do with the sudden accession of severe symptoms.—Dr. EDIS called attention to the monograph of the late Dr. Parry of Philadelphia, who was led, by his statistics, to condemn the puncture of the cyst, and to recommend either removing the fœtus entire, or allowing the cyst to remain uninjured.—Dr. BARNES was inclined to think that the present might be reckoned among a few exceptional cases, in which removal of the placenta might be justifiable, the hæmorrhage being afterwards stopped by compressing the abdominal walls together.—Dr. BRAXTON HICKS said that most of the speakers had mistaken the state of the case. Urgent symptoms suddenly came on while he was waiting for a short time to consider the best line of treatment. The tension was then so great as to obliterate the previous outline, but he did not think that the position of a souffle would always absolutely determine the site of the placenta. He differed from Dr. Routh, and regarded the violent saltation of the fœtus as evidence of its impending death from asphyxia. No great amount of recent blood was lost during the operation, but the question he had asked was, What the treatment should be if the placenta were cut, the fœtus being still alive? He could not agree with Dr. Barnes that the placenta might be removed without too great risk of hæmorrhage. In answer to the President, he thought that it would be extremely difficult to carry out the antiseptic treatment perfectly, though it might be possible under advantageous circumstances.

Dr. G. F. FULCHER narrated two cases of Extra-uterine Fœtation. Case 1. On July 10th, 1872, the author was called to the wife of a cottager, who was suffering from intense abdominal pain, and showed signs of violent internal hæmorrhage. There was no vaginal discharge, uterus moderately enlarged, fundus tilted backward. Extra-uterine fœtation, with rupture of sac, was diagnosed, and the patient died in a few hours. At the autopsy a fœtus of about five months was found in the abdomen, together with a detached placenta, whose attachment had been parietal. Both tubes were intact. The final attack came on while the patient was drawing water from a well. There had been frequent uterine hæmorrhage previously. She was thirty-two years old, and this was her third pregnancy.—Case 2. A woman, thirty-two years old, pregnant for the second time, was expecting her confinement in November or December, 1879. On Dec. 6th the author was summoned on account of paroxysmal pain, with sickness. He found the uterus only moderately enlarged, retroverted, os pointing forwards and upwards towards the symphysis. The fœtal heart was heard over right side of abdomen. Next day, in consultation with Dr. J. B. Maurice, the uterus was ascertained to be empty. It was decided to remove the patient into the Savernake Hospital, there to perform gastrotomy, but some inevitable delay occurred. Reference was also made to an eminent authority in town, who said that it was better, *ceteris paribus*, to wait until the death of the fœtus and then quietly to operate. The fœtal heart was heard up to the 12th, and movement continued until the 14th. She was removed on the 16th, at which time the violent paroxysmal pains had ceased. On Dec. 18th, peritonitis having set in, operative measures were abandoned, and she died on the 20th. The autopsy revealed a large child, weighing nine and a half pounds; placenta attached over left iliac fossa, broad ligament and abdominal wall up to linea alba. The cavity contained grumous fetid fluid.

CAMBRIDGE MEDICAL SOCIETY.

Anomalous Choreic Spasms.—Intestine Ruptured through Violence.—Recovery after Severe Injury to Brain.—Scirrhus of Pylorus, combined with Simple Ulcer; Unusual Secondary Infection.—Glandular Tumour of Lip, containing Cartilage.

AT the meeting of the Society on the 7th ult. Professor Paget, M.D., F.R.S., President, in the chair—

The PRESIDENT showed a patient the subject of Anomalous Choreic Spasms. The patient is a robust labouring man, of ruddy complexion, well built, middle height, aged fifty. He has been under observation for eleven years, the symptoms having remained much the same throughout the whole of that period. The spasmodic movements are of the right arm and leg, and they are not continuous, but interrupted. He will sit quite still for a time, when the jerking movements of the limbs will suddenly begin, the most usual being a rapid tapping on the floor with the toe of the right foot. The vibrations or oscillations, both of the arm and leg, are usually of the short and rapid kind, but they are occasionally diversified with movements more extensive and more energetic, which increase in intensity until they reach a culminating point. It is scarcely probable that this disorder is merely functional, the patient being a stout labouring man. There is probably some organic disease, sclerosis or some other chronic condition of the cerebro-spinal centres. The symptoms resemble most closely those of disseminated sclerosis, but they are peculiar in several respects. The most remarkable thing is that after eleven years he is no worse; the head symptoms are not aggravated, the sight is not impaired, there is no oscillation of the eyeballs, nor the drawling kind of speech. Another point of difference is that the movements begin as if spontaneously from a state of rest, and not, as in cases of sclerosis, upon moving the arms or legs by an act of the will. When he gets up to walk the spasmodic movements cease, and his gait is, on the whole, firm and regular. Other differential points are: the vibrations are rapid and of limited range; there is no want of co-ordination; no paralysis or paresis; no wasting of the muscles; the patellar reflex is present, and the same on the two sides. It is difficult to localise the chronic lesion that is presumably present, the symptoms are neither those that arise from disease of the posterior columns, nor the symptoms of the ordinary antero-lateral sclerosis. A great number of remedies have been tried, but only two proved markedly

beneficial—viz., cod-liver oil and sulphate of zinc (fifteen-grain doses). The improvement was greatest when the two remedies were taken together.

Dr. BACON showed a specimen of Intestine Ruptured through Violence. The patient, a man aged forty, was an inmate of the Cambridge County Asylum, in good bodily health, but a dangerous lunatic. He had frequently committed assaults, and his removal to another asylum, furnished with more special means of restraint, had actually been advised. The injury was received in some unknown manner, in a scuffle with another patient and with the attendants who interposed. When he was secured it was found that the first requirement was a bath, to remove the effects of an involuntary defecation. During the bath and after it he showed no signs of collapse. Death followed in twenty-four hours. There was the mark of a not very extensive bruise in the right lumbar region. On opening the abdomen there was a rush of fetid gas, and the cavity was found to be occupied with fæces and fluid. Peritonitis had begun; there was no rupture of the liver, spleen, or kidney; the laceration of the intestine was in the jejunal portion; the tear was transverse, extending round the free border half-way to the mesenteric attachment; the edges were widely separated, and the deep red villous mucous membrane was everted.

Dr. EASBY gave an account of a case from former practice, in which a severe injury to the brain, in a child, from a penetrating wound, had been followed by complete recovery in a few weeks.

Dr. BRADBURY showed specimens from a case of Scirrhus of the Pylorus, in which there was a combination with simple ulcer, and in which the course of the secondary infection was somewhat unusual. The patient was a woman aged sixty-eight. The symptoms (vomiting, &c.) had been observed for three years, and, two months before her death, a number of scirrhous nodules had appeared on the skin, some of which became red and painful. A tumour also appeared over the middle of the femur in front. After death the stomach was found to exhibit one small healed ulcer, without any infiltration of thickening near it, about the size of a sixpenny piece, on the posterior wall and near the greater curvature. There were two other small shallow depressions with smooth (cicatrised) surface, just within the pylorus, and in the submucous tissue beneath and around one of them there was a flat nodule of intense hardness, about one inch in diameter, and not more than a quarter of an inch thick at its thickest part. The muscular ring of the pylorus was much thickened, and admitted the point of the little finger. In the dense connective tissue round the pancreas (which was connected to the back of the stomach) there was numerous enlarged and cancerous lymphatic glands embedded. The gastro-hepatic omentum was normal, as well as the peritoneum generally. There were no secondary tumours in the liver or in any other organ. The retro-peritoneal glands on both sides of the spine in the lumbar region were enlarged and cancerous, and matted together. The skin round the umbilicus was occupied with a number of hard button-like nodules, and the same were found in the pectoral regions, and over the right scapula. The tumour on the femur lay beneath the crureus, and had formed in the periosteum, the subjacent bone being merely roughened on the surface. The tumour was larger than a hen's egg, and of medullary consistence and white colour. A microscopic examination of the tumours in the various parts, which had been made for him, showed the flat nodule at the pylorus to have the character of scirrhous infiltration, epithelial cells, with relatively large nuclei, arranged in linear rows or alveolar groups in the interstices of the submucous and muscular coats. The nodules in the skin had precisely the same structure (epithelial infiltration in the subcutaneous tissue), and so also had the tumour on the femur, the epithelial cellular elements in the latter being more abundant, and the stroma more scanty, in correspondence with the medullary consistence of the growth.

Dr. HUMPHRY showed a tumour which he had removed from the upper lip of a woman aged thirty-five. It was a very firm nodule the size of a large hazel-nut, and although both the skin and mucous membrane were freely movable over it, he felt uncertain about its malignancy, and removed it by V-shaped incision through the whole thickness of the lip. The tumour proved to be definitely circumscribed, with loose connective tissue round it. Some of the labial mucous glands adhered to its posterior surface. A section through the middle of it revealed several hyaline cartilaginous areas. On microscopic examination, numerous traces were found of the gland structure of the mucous glands of the region, undergoing a variety of complex transformations. The cartilaginous spots had in some places the tolerably perfect structure of hyaline cartilage. The tumour had grown from the mucous glands of the upper lip, and had undergone, here and there, a cartilaginous transformation, which was no doubt of the same nature as that which occurred in parotid tumours, and more rarely in mammary tumours. The character of the tumour, as seen after its removal, favoured the idea that it was non-malignant.

Dr. BRADBURY showed, from a case of Psoas Abscess, the organs with well-marked lardaceous change. The liver weighed fourteen pounds twelve ounces.

Dr. INGLE showed microscopic specimens and drawings of the parasitic fungi in certain skin-diseases.

Reviews and Notices of Books.

Cooley's Cyclopædia of Practical Receipts and Collateral Information in the Arts, Manufactures, Professions, and Trades, including Medicine, Pharmacy, Hygiene, and Domestic Economy. Designed as a comprehensive supplement to the Pharmacopœia and general book of reference for the manufacturer, tradesman, amateur, and heads of families. Sixth Edition, revised and greatly enlarged. By RICHARD V. TUSON, F.I.C., F.C.S., Professor of Chemistry in the Royal Veterinary College, formerly Lecturer on Chemistry at the Charing-cross Hospital. 2 vols. London: Churchill. 1880.—Cooley's Cyclopædia still remains without a rival in its way, and goes on from edition to edition with constant accession of bulk and value. It has, at last, outgrown the limits of a single volume, and appears in the form of two goodly octavos. The present edition has been published in monthly parts, and is larger by some 600 pages than the last. Professor Tuson has evidently spared no pains upon it, and his additions and corrections are innumerable. The book has long ceased to be a mere dictionary of receipts, although its character in this respect has never been lost, for receipts abound on almost every page. But it contains, in addition, a vast mass of information in all branches of theoretical and applied science, and much that can be found in no other book. It will be useful to every medical man, and almost equally so to every household. It may be added that any occasional taint of quackery that may have been detected in earlier editions seems to have been very carefully expunged.

Degeneration; a Chapter in Darwinism. By Professor E. RAY LANKESTER, F.R.S. London: Macmillan. 1880. —Professor Lankester's evening address at the last meeting of the British Association is now added to the Nature Series of scientific works. Numerous examples are brought forward to prove that degeneration as well as progressive elaboration must be taken into account on a far greater scale than is usual with biologists, when they endeavour to trace the genetic relationships of the various members of the animal kingdom. The author has not limited himself to the consideration of the scientific question, but has thought it necessary to introduce speculations on religious questions which are quite out of place in a work of this character, and disfigure an otherwise valuable discourse.

Royat-les-Bains. By G. H. BRANDT, M.D. London: H. K. Lewis. 1880.—In the autumn of 1877 we drew the attention of our readers to the baths of Auvergne, and among others to Royat, which is the subject of Dr. Brandt's monograph. The town of Royat is pleasantly situated at a height of 1400 feet above sea-level, close to the fine old town of Clermont-Ferrand; and its waters are warm and slightly mineralised, containing alkaline carbonates and chlorides. The reputation of this watering-place for the cure of chronic gout is considerable, and those who intend

visiting it should furnish themselves with Dr. Brandt's little book, which contains all necessary information.

The Student's Guide to Surgical Anatomy. By EDWARD BELLAMY, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, Charing-cross Hospital, &c. London: J. & A. Churchill. 1880.—Mr. Bellamy's small work on Surgical Anatomy is so well known to advanced students that a detailed description of it is quite unnecessary. In his new edition the author has made several improvements; the arrangement is clearer, and many new illustrations have been introduced. The descriptions of the fasciæ are fuller than in many of our text-books, and the manual quite deserves its name of a "student's guide."

New Invention.

APPARATUS FOR TREATING CICATRICES OF THE NECK.

AT a recent meeting of the Manchester Medical Society, Mr. E. Stanmore Bishop showed an apparatus made for him by Messrs. Holdernesse and Co. for the treatment of cicatrices of the neck depressing the lower jaw. It consists of a metal plate fitting to the back and over the shoulders, to which is fixed a modification of Sayre's jury-mast, with three rack and pinion movements. A cap of metal or poroplastic felt is fitted on to the chin, and attached to the arms of

the jury-mast by a chain on each side, in which is interpolated one or more elastic rings. In this way the extension can be made without pressing upon the chest and impeding respiration; it can be graduated as required, and, being elastic, is continuous, and does not interfere with eating. It could be simplified and cheapened by using Sayre's plaster jacket instead of the metal plate on the back. The difficulty in these cases is to get a firm hold on the chin, as it is so often but little prominent, if at all.

HOSPITAL ADMINISTRATION IN INDIA.

To the Editor of THE LANCET.

SIR,—In your leader of the 15th ult. on the subject of the Calcutta hospitals you have been good enough to approve of my definition of the duty of a medical officer in his relations to the sick, but you seem disposed to think that, in my letter of Nov. 19th to the Bengal Government, I have spoken too lightly of certain irregularities in the drug department of the General Hospital, for the existence of which, as will be observed in the sequel, I cannot be held accountable.

It has been constantly overlooked, in this controversy, that my last annual indent for drugs was dated on or about May 31*st*, 1875, that, judging from the papers before me, no loss of medicine or irregularity has been demonstrated as having occurred within the four corners of my tenure of office; that those drugs which were said to have been written off and found intact in store in October, 1877—nineteen months after my departure on furlough, on April 1st, 1876, and after two other annual indents must have been submitted, on May 31st, 1876 and 1877, with which I could have had no direct or indirect concern—may, as I suggested, have been condemned in good faith. Whether this be the true explanation or not, it is, however, not for me to say. When you ask—"And if thus written off, were they not liable to be removed without any chance of detection?" my answer is No, because the general store was secured in a strong room by Chubb's lock and key, and under the undivided custody of the resident surgeon.

If you will do me the honour of referring to the thirty-first paragraph of the letter aforesaid, you will find it there stated that, "notwithstanding a liberal and benevolent system of feeding and comforting the sick, the provisions to secure economy and a proper adjustment of supplies to requirements were always so successful as to demonstrate monthly a substantial saving within the limits of the maximum allowed," which shows that, in my administrative capacity, economy of the public money was always an important consideration, and received special attention.

The question now at issue is, Are the new rates of 3 annas and 6 pies or 5½*d.* for natives, and 8 annas or 1*s.* a day for Europeans, sufficient for the supply of first-class food, extras, and stimulants for the sick? I fear not. That they appear to fail in this important respect is manifest from the trouble which has been taken to prove that second-class and inferior and cheaper food, &c., is quite good enough for the sick in Calcutta; from the almost complete denial of extras and stimulants in the Sealdah or Campbell Hospital, where the cases are so grave that the annual death-rate averages 250 in the 1000; from the importation annually of about 10,400 diets from the homes of patients into the College Hospital; from analogous reinforcements in the General Hospital; from the earnest appeal of the Principal of the College for an increased allowance of 5 annas (7½*d.*) and 10 annas (1*s.* 3*d.*) a day for natives and Europeans; from the dissatisfaction with the present dietary openly and officially expressed by the Professors of Medicine, Midwifery, and Materia Medica (College Hospital), by Dr. Cobb (General Hospital), Dr. Tameez Khan (Campbell Hospital), and the late Surgeon-General for Bengal.

Whilst, therefore, it must be acknowledged that these revelations, viewed in the aggregate, furnish a strange and singular commentary on the Lieutenant-Governor's assurance that the system is working "satisfactorily and smoothly," they apparently indicate the necessity for a careful reconsideration of the subject by experienced medical officers *not serving under the Bengal Government*, in order that the proper dieting and treatment of the sick may be settled on a basis alike satisfactory to them, the physicians and surgeons who have to feed and treat them, and the Government which has to find the ways and means. If the existing system is actually as good as it has been made to appear on paper by the Bengal Government in the medical department, there ought to be no objection to an impartial investigation into its merits. Such an independent inquiry is all the more imperatively necessary since, by recent changes, the College, General, and Campbell Hospitals are now managed by three of the members of the late committee, and supervised by the senior medical member lately translated to the office of Surgeon-General for Bengal. In venturing to make this suggestion, my wish is not in the least degree to impute "motives to, or to impugn the good faith and common honesty of any one," but to give definite expression to a feeling very generally entertained beyond the precincts of the small circle with which the Lieutenant-Governor is immediately surrounded, a feeling which has been materially strengthened by the circumstances connected with the resignation of the principalship of the Medical College by Dr. D. B. Smith, a gentleman no less esteemed for his social than for his general and professional attainments.

I remain, yours very faithfully,

JOSEPH EWART, M.D.,
Late Superintendent of General Hospital, Calcutta.

Brighton, June 1st, 1880.

THE LANCET.

LONDON: SATURDAY, JUNE 5, 1880.

THE meeting of the Council of the Royal College of Surgeons to be held on Thursday next can hardly fail to excite the attention of everyone who is interested in the vexed and perplexing questions of medical education. Rarely, if ever, has the Council occupied so conspicuous a position. On the decision of a majority next Thursday will depend the fate of the Conjoint Scheme for England, and of another measure of scarcely less importance—namely, Mr. MARSHALL'S proposal to institute a compulsory examination in elementary Anatomy and Physiology, to be passed by all candidates for the diploma of member at the end of the first year of professional study. There should be no risk of caprice or prejudice deciding the action of the Council in either of these matters. The discussion upon them should be free, full, and exhaustive, but devoid of the smallest taint of bigotry or bias. The responsibility of recommending a withdrawal from the projected Conjoint Scheme, and of thereby nullifying all the thought and deliberation, and the legislation of the last ten years is enormous; and it is, under the circumstances, difficult to avoid a suspicion that the Council has taken its last step hastily and with precipitancy. The Royal College of Surgeons, it must be remembered, is only one of seven co-operating authorities, and it is precisely the one for which a Conjoint Examining Board is most urgently needed, inasmuch as it is the only examining board in England—nay, perhaps in the United Kingdom—which is able and allowed to grant a registrable qualification that does not include a guarantee of proficiency in Chemistry, Materia Medica, Pharmacy, Pathology, Midwifery, and Forensic Medicine. Even its examination in Medicine is a trifling affair, and conducted more as a matter of form than as a serious test of a candidate's fitness to engage in the practice of his profession. The Council will, of course, excuse itself for abandoning the Conjoint Scheme at the last hour by averring that it does so in order to take a more independent course, and to be unfettered in instituting, either on its own account or in conjunction with one or other of the examining bodies, a larger and better examination that will include Chemistry, Materia Medica, Pharmacy, and Midwifery, so that its diploma shall be henceforth a genuine qualification of fitness to practise the different branches of the healing art. This may be so, and we have no desire to impugn the good intentions of the Council. But the end of good intentions is proverbial, and the Council should not forget that any delay in carrying out its proposed reforms may not unnaturally be regarded as a flagrant breach of public faith. The defects of medical education and medical examination have now attained a point at which delays and prevarications can and will be no longer tolerated; and if the Council of the Royal College of Surgeons cannot see it for itself, it must be plainly told that the existence of its Corporation as an examining body is now at stake. Some members of the Council seem to shut themselves up in a kind of fool's paradise, and imagine that the reason they have so large a number of applicants for their diplomas is that the diplomas are held in such high esteem. This is a silly infatuation. The diplomas of the College are sought after because they are the most easily obtained. At the Royal College of Physicians, for instance, no candidate can acquire even the licence without passing a really good examination in Chemistry, Materia Medica, Pathology, Midwifery, and Forensic Medicine, over and above what is needed for the membership of the Royal College of Surgeons. If the College of Physicians could only be wakened out of the stupor into which it has sunk and bestir itself, it might almost at once and for ever take the foremost place as the examining board in England for qualifying the great body of the practitioners of medicine. Were Parliament to insist, as it ought, upon all medical practitioners possessing a complete qualification, embracing Surgery, Medicine, and Midwifery, the ground would be cut away from the Royal College of Surgeons, and we should soon hear the last of its supposed ascendancy. We are far from wishing or seeking such a retribution. The Royal College of Surgeons has served a useful purpose, and has a claim upon the gratitude of every Englishman. Nothing would be more unwelcome than a decline of its prestige or a decay of its influence and power. Its future is, however, in its own hands. If it will adapt itself to the spirit and circumstances of the time there is no reason why its sphere of usefulness should not be extended, and its honour and glory enhanced. To this end the Council must spare nor time nor energy to eradicate the disgrace of granting a qualification so miserably inadequate to the demands of public convenience and safety.

The other matter to be brought before the Council on Thursday next contrasts strangely with this disregard of Chemistry, Materia Medica, and Midwifery. It is the proposal of Mr. MARSHALL to institute a compulsory examination in Anatomy and Physiology at the end of the first year of professional study. Some persons believe that the subjects of Chemistry, Materia Medica, and Midwifery are neglected in consequence of the stress laid by the Council of the Royal College of Surgeons on Anatomy and Physiology. Mr. MARSHALL'S scheme seems calculated to starve them completely. It is to be hoped that the Council will not take a slant-eyed glance at this matter, but will view it as a small but significant portion of the larger question of medical education generally. We believe that the recent recommendation to the Council to withdraw from the Conjoint Scheme was debated at some length, but it is stated that Mr. MARSHALL'S motion was put to the vote without any discussion whatever. Should the members of the Council repeat this apparent indifference, serious evils may arise. There is, of course, something to be said on both sides of the question, and it is desirable that all the arguments for and against the proposal should be fully stated and calmly weighed. There is, however, one preliminary matter that requires to be cleared up and explained. When Mr. MARSHALL first brought his scheme before the notice of the Council, four years and a half ago, a committee was appointed to consider it and report thereon to the Council. Mr. MARSHALL is stated to have alleged that this committee reported favourably. Where is this report? It has never been published or commented on in any of the

Presidential Reports to the Fellows. Moreover, the arguments which Mr. MARSHALL used were specifically controverted, whether designedly or not we cannot say, in the answers which the Council of the College returned to the interrogations of the General Medical Council in 1877—that is within fifteen months of the time that Mr. MARSHALL first brought his motion forward. Mr. MARSHALL complained that the medical student's defects were chiefly seen in Anatomy and Physiology. The Council's answer to a special query of the General Medical Council was that the failures "are not particularly in any one subject or any one part of the examinations, but are equally (or nearly so) in all the subjects and parts, and that candidates who fail in one subject or one part are very generally found at fault in other subjects or other parts." Mr. MARSHALL maintained that it was desirable to institute a third examination—that is, a compulsory examination in Anatomy—at the end of the first year, in order to prevent idleness in the first-year's student, and to give directness to his studies. The Council, in answer to the General Medical Council's question as to the desirability of making an alteration in the subjects of the examinations, as to their number, range, division, or combination, or in the mode of conducting them, said that it did not see "any reason for changing either the subjects or the conduct of examinations." Mr. MARSHALL again affirmed that "those who enter upon their studies *now* are younger than their predecessors were when they began attendance upon anatomical lectures and to work in the dissecting-room; their minds are less formed, less ripe for, and bent upon thoroughly practical and efficacious study." The Council a few months later, in answer to the General Medical Council, said it was "of opinion that the attainments, general and professional, with which candidates present themselves for examination, are now, on the whole, higher than they were ten or fifteen years ago." We do not care to say which is the more correct, Mr. MARSHALL or the Council of which he is deservedly an influential member; all we are concerned with just now is to point out the strange discrepancy, and to warn the Council that it cannot off-hand decide this matter one way or the other without laying itself open to the charge of inconsistency.

We will not disguise the hope that the Council will, instead of at once adopting Mr. MARSHALL'S proposal, rather appoint a trustworthy committee to consider and report on its desirability. We would even suggest that it might not be inconsistent with the duty or dignity of such a committee to take the opinion of some of the leading teachers of anatomy and physiology. If it should so happen that the balance of opinion was decidedly in favour of the adoption of some such scheme as that which Mr. MARSHALL proposes, the Council might consider the propriety of remodelling its answers to the General Medical Council, and ask that body to take some steps, or make some suggestions, calculated to remove and prevent the more obvious defects in medical education. We repeat, we are convinced that reform must begin at the beginning, that is, at the preliminary education, gradually working its way through every department of professional education, till it reaches its term by this indirect path in the examinations themselves. The facilities for gaining knowledge ought to be increased, and the character and quality of the teaching correspondingly improved. The student will learn better when he is better taught. Lazy students there are, and always will be. Medicine has not a monopoly in this respect; but, as we remarked on a former occasion, and as Mr. GOULD repeated last week, the laziness is not unfrequently acquired and even enforced. This is especially true as regards the study of Practical Anatomy. The supply of subjects for dissection is wholly inadequate at the metropolitan medical schools, and in the larger schools many students must perforce remain comparatively idle for lack of material for dissection. As to an advanced student keeping up his anatomy by dissection, it is simply impossible. After the primary examination in Anatomy and Physiology is passed, no student in a metropolitan school ever has an opportunity of practising dissection. Little wonder that his knowledge of medical and surgical anatomy at the pass examination is vague and confused. At the period of his curriculum, when the student could profit most by a short course of dissection, he is absolutely debarred by want of material. If Mr. MARSHALL will ensure an adequate supply of subjects for dissection not only for first, second, and third years' students, but also for senior students who should be compelled to study by dissection surgical anatomy in addition to operative surgery, for three or six months after passing the primary examination, and before presenting themselves for the pass, he will do an infinite service to surgical education. But, we protest again, the advantages of a compulsory inquisitorial examination at the end of the first year are at least equivocal.

EVERY summer brings under the notice of some members of our profession cases of the most startling of all the accidents to which men or animals are exposed—injury or death by lightning. The cases are of interest rather from the conditions of their occurrence than from their character, and the attention they excite is rather that of curious wonder than of scientific inquiry. For the latter, indeed, they afford few facilities. Their severity too often withdraws them from the scope of useful observation, and the circumstances under which they occur are not favourable to pathological research. Scientific pathology, too, has done little to aid the practitioner by ascertaining the points to which his attention may be directed. Experiment has left the subject almost unnoticed. We welcome, then, with much interest the publication in VIRCHOW'S *Archiv* of a series of experiments by NOTHNAGEL which, while they supply some interesting and important facts, show also how wide a field the subject presents for further investigation.

The experiments referred to were suggested by a clinical observation of great interest, but the mention of which may be deferred till the experiments have been described. These consisted in observing the effect of the repeated discharge of a Leyden jar through some part of an animal's body—rabbits being the animals on which the observations were made. Only the mildest forms of lightning-stroke were thus imitated, but the results obtained are very instructive. The repetition of the discharge was arranged to avoid the fallacy of imperfect results. The effect of several discharges appears to be somewhat greater than that of one only, and by employing several the chance of one having failed to produce its due effect was avoided. At first the ends of the

conductors were merely placed in contact with the skin. The resistance of the skin, even when shaven and wetted, was found to be so considerable, and the escape of the electricity along the surface of the skin so great, that it was found necessary to introduce the points of the electrodes beneath the skin.

The first observations were made by attaching one conductor beneath the claws of a hind-leg, and the other to the groin. It was invariably found that when the discharge passed from the groin towards the foot no motor disturbance followed, but there resulted loss of sensibility in the foot, sharply limited at the articulation of the foot to the leg. Sensibility was tested with the faradaic current. At the point at which the discharge entered, in the groin, there was not the least loss of sensibility. If the direction of the discharge was reversed, the conductors remaining attached to the same part, the result was exactly the same. A similar effect was produced also when the upper conductor was connected with the side of the thorax or abdomen, instead of with the groin. If the peripheral conductor was attached to a fore-paw instead of to the hind-paw, the same anæsthesia was observed in the foot to which it was attached, the loss of sensibility being also limited by the position of the articulation. When the conductors were connected, one with a hind-paw the other with a fore-paw, in each extremity, there was anæsthesia as far as the foot articulation, and none in the intermediate part.

The exact distribution of the anæsthesia thus curiously limited was then investigated in another series of experiments. After the administration of the shock through the leg, the skin was removed from the foot, and the anæsthesia was found to involve the deeper parts, including the nerve trunks. At the articulation, corresponding to the limitation of the surface anæsthesia, the articular surface of the leg bone was still insensitive, together with the periosteum above the condyles and the adjacent soft parts, but a few millimetres higher sensibility suddenly commenced. The boundary between the two was an annular line around the leg. An hypothetical explanation of this singular limitation is that the electricity, when it reaches the long bones of the leg, is conducted in these only, and the soft parts do not suffer as they do in the foot. This explanation is rendered improbable by the fact that the periosteum just above the condyles is sensitive. It was, however, effectually disposed of by an experiment in which the same results were obtained after the tibia and fibula had been excised. Another possible explanation is that the conduction is chiefly by the soft parts, and that the paucity of these in the foot leads to the concentrated action of the electricity there. It was shown, however, that this explanation as such is insufficient, by an experiment which demonstrated that when one conductor was attached to the other parts, as the back, where the soft parts were equally scanty, no anæsthesia was there produced. Moreover, it was found that when the electrodes were fixed, one to the groin and one to the leg, or one to the groin and the other to the thorax, no anæsthesia occurred.

Thus hitherto the only positive fact ascertained was that when the foot was the point of entrance or exit of the shock, it, and it alone, was rendered anæsthetic. The discharge was then sent from one fore-paw to the tail. It was found that the whole tail (as well as, of course, the foot) was rendered anæsthetic, and the loss of sensibility extended as far as the insertion of the muscles at the root of the tail. In one experiment of this character, however, it is important to note, in which the discharge employed was comparatively feeble, the anæsthesia was produced in the tail, and not in the foot. This anæsthesia of the tail suggested to NOTHNAGEL the probable explanation of the anomalous condition of the foot. ARAGO expressed the opinion that when lightning strikes men or animals that are near together, in a straight line, or in an open curve, its action on the extremities of the line is always the most severe. The lightning, for instance, struck a stable in which thirty-two horses were standing in a row. Thirty were thrown down: one was dead—that at one end of the series; another was much injured, and subsequently died—that standing at the other end. Five children were sitting, reading, on a form in a house which was struck: the first and the last were killed; the three others were merely severely shaken. In these facts we have an analogy to those of the experiments, but they do not explain the sharp limitation of the anæsthesia, or its absence at the electrode placed on the thigh or trunk. Doubtless the reason is to be found in the laws of conduction in the animal body. The density of the electricity is greatest at its points of entrance and exit, and elsewhere it is less from the greater or less diffusion according to the transverse section of the conduction. The mechanical or other action of the electricity is the more considerable the smaller the transverse section and the less conducting power of the structures. Hence the effect on the sensory nerves, with the comparatively feeble shocks employed, is absent on the trunk, great on the foot; and hence, too, the effect ceased suddenly upon the tail at the point of insertion of the root muscles—i. e., when the size of the transverse section suddenly increased. The effect on the foot is intelligible on the same hypothesis, if we assume that the bones conduct frictional electricity less readily than the soft parts, just as is known to be the case with voltaic electricity. In the foot there is much bone and little soft part, the transverse area of the good conductor is small, and the effect of the discharge is great. Just above the joint there is a great increase in the area of the good conductor, and hence the intensity and physiological effect of the discharge become much slighter. In confirmation of this view, it was found that, by employing stronger discharges, the effect (anæsthesia) extended higher up the leg than in the preceding experiments—i. e., an effect was produced when the area of the conductor was greater. Moreover, in one of these experiments a distinct effect on the motor power was produced. The absence of anæsthesia at the electrode applied to the thigh or trunk may be explained by the rapid diffusion of the electricity, any action at the mere point of the electrode being inappreciable on account of the small size of the latter. This is confirmed by one experiment in which, with an unusually strong discharge, there was a small area of anæsthesia, about one centimetre in diameter, around the electrode on the thigh.

The anæsthesia was complete in degree immediately after the experiment, so that the strongest faradaic current was unfelt, but it was transient, disappearing in the course of one to two hours, and in some cases it seemed to be succeeded by a transient hyperæsthesia. Motor disturbances

in these experiments were not conspicuous. The discharge always caused a convulsive jerk of the limb, and sometimes a slight movement of the whole body; but subsequent motor weakness was observed only if the electrodes were placed one on the front and one on the back of the thigh, so as to include between them the sciatic nerve. Then a complete paralysis of the leg was caused, and when the electrodes were placed on each sciatic nerve, paresis of both hind limbs was the result. The course of the motor weakness corresponded to that of the anæsthesia, but it disappeared in an even shorter time. During the existence of the motor weakness a very distinct diminution of the electrical irritability of the nerve was found to exist.

The direct clinical bearing of these experiments is shown by the case which suggested the investigation. A man was struck by lightning in the year 1873; he was unconscious for about five hours, and then felt well and was able to stand, but was unable to use his right hand, which had moreover lost sensibility, and in the middle of the back of the hand was a brown spot the size of a florin. At this spot the electricity had probably entered. No mark indicated its point of exit. He was treated by galvanising and rubbing for ten weeks, without improvement, and then power and sensation returned in the course of two days. He continued well until October, 1879, when, suddenly, while at work, the hand became powerless and insensitive, exactly as before. Galvanisation had now no effect. When he came under Dr. NOTHNAGEL'S observation in the beginning of the present year, the shoulder and elbow-joints could be moved fairly well, the movements of the wrist-joint were considerably impaired, and the fingers were almost motionless. There was a distinct atrophy of the interossei, which had been observed in the earlier attack, and was said to have disappeared, but this was doubtful. A diminution in electro-muscular irritability was found. The hand was completely anæsthetic, and the loss of sensibility was sharply limited by a line around the limb, just above the wrist-joint. He was treated for a few days with the faradaic and voltaic current, without any improvement. A trial was then made of a large horseshoe magnet which had been used for some experiments on cerebral anæsthesia. Both poles were placed on the ulnar half of the hand. In an hour and a half the patient complained of tingling at the spot where the magnet lay. In four hours and a half he could feel the prick of a needle at the spot. The magnet was then removed, and two hours later, the magnet not having been reapplied, some sensation had returned on the dorsal surface of the fourth and fifth fingers. Next morning sensation had improved still more, and the fourth and fifth fingers were slightly movable. The magnet was applied for several hours daily, and each day further improvement occurred, and in four days sensibility and mobility were normal. There was no diminution of sensibility (*transfest*) in the left hand. NOTHNAGEL points out the analogy between the last sudden paralysis and forms of hysterical paralysis, although there was not much question of "hysteria" in the burly smith who was the subject of the affection. The second attack of paralysis was very curious; its importance is that it was apparently an exact reproduction of the first attack, and presented a close correspondence with the experimental results obtained by NOTHNAGEL. Rarely, indeed, have clinical observation and experiment furnished a more conspicuous agreement.

The experiments, taken in conjunction with other clinical facts, show how favourable is the prognosis of partial paralysis by lightning. They show, also, as NOTHNAGEL points out, that we must be sceptical as to the influence, in many of these cases, of the "prompt treatment" by which recovery was preceded. In the first attack in his patient no effect can be ascribed to the electrical treatment. How the magnet in the second led to the disappearance of the symptoms, he wisely does not venture to suggest, but he promises some further experiments on this point, which we shall look for with much interest.

THE recent answer of the Vice-President of the Council to Mr. ERRINGTON will be read with interest by the profession. Mr. ERRINGTON asked Mr. MUNDELLA whether he would move the reappointment of the Select Committee on the Medical Acts, in order that the inquiry into medical education and registration might be continued. The Vice-President of the Council replied that the committee was appointed last session, not to inquire into the Medical Acts, but to consider three Bills which the House referred to it, one of which was a Government Bill. It was not the intention of the Government to reintroduce the Bill this session, and during the recess the whole question would probably be reconsidered. There was no reason at the moment for the reappointment of the Committee.

We have been in favour of the reappointment of the Committee this year, believing that there was just time for it to finish the investigation which had been well begun, but there is undoubtedly much to be said in favour of the course announced by Mr. MUNDELLA. We are now in June. Two or three of the more active members of the late Select Committee are not in Parliament; the Chairman of it is deeply engaged as a Cabinet Minister and Secretary for Ireland. In these circumstances any fresh committee would come to the subject almost *de novo*. We must therefore, however reluctantly, admit that there is much reason for postponing the question, and taking time to consider it. It is not one that is easy to mere politicians. It is somewhat technical and complicated in appearance. But it is not nearly so much so as it looks; and Mr. MUNDELLA will master it in a few days if he gives it the consideration which on Thursday last he promised Mr. ERRINGTON it should receive. The state of the case is very much as follows:—

1. Nineteen more or less competitive bodies, in different divisions of the kingdom, grant forty or fifty qualifications admitting to the Register and conferring the right to practise in all parts of the empire.

2. The minimum examinations of these bodies admit to the Register, and they are considered to be very unequal, so that persons failing repeatedly at one Board may go quite hopefully to another.

3. All the Qualifications of the different bodies, with the exception, perhaps, of the licence of the College of Physicians of London, are single qualifications only. Even if the examinations for any one of them cover all branches of the profession, the qualification given after passing is incomplete—medical only or surgical only,—not both.

4. Though the examinations are confessedly unsatis-

factory, the rejections are numerous, showing a very ineffective state of medical education.

5. The Body superintending medical education—the General Medical Council of Education—is made up predominantly of the bodies interested in the continuance of these imperfect and incomplete examinations, some of them being prevented by Charter from making their examinations complete.

6. The General Medical Council is maintained by the general practitioners of the country, who are entirely unrepresented on the Council.

7. The general body of the profession have in various ways expressed their deep dissatisfaction with the costliness and the inefficiency of the General Medical Council, and have powerfully and successfully opposed Medical Bills which have not provided for its reform.

8. Finally, the medical profession feels aggrieved by the fact that, while the General Medical Council, acting under the Medical Act, has added seriously to the cost and difficulty of entering the profession, it has done very little to improve medical education and to discourage fraudulent and unlicensed forms of practice.

These are the chief points in a question which interests the medical profession, and still more the public. It has been before Parliament for a decade, and was never so near ripe for solution as now. Eight or ten more witnesses would complete the evidence on which legislation must be based, and it will be a credit to the present Ministry to make good arrangements for this end. We will cheerfully concede them time to do so. But the case is urgent, and will not admit of indefinite delay.

Annotations.

"Ne quid nimis."

COLLEGIATE ELECTION.

THOUGH the number of vacancies to be filled up in the Council of the Royal College of Surgeons next month will be larger than usual, there is little likelihood of a dearth of candidates. There will be four vacancies, and there is already the promise of eight or nine candidates, two of whom are Fellows residing and practising in the provinces—namely, Mr. Cadge of Norwich, and Mr. Reginald Harrison of Liverpool. We have never acquiesced in the principle that there should be a special representation of the provincial Fellows as such, believing that there are no interests or privileges relating to the College which are not common to metropolitan and provincial Fellows alike. But our objection has always been confined to the principle of special representation of the provincial Fellows, and has never extended to the candidates who have been induced to offer themselves for election. It is gratifying to find a gentleman of Mr. Cadge's high reputation and acknowledged good sense announcing that "he recognises no distinction or antagonism between metropolitan and provincial interests." On the other hand, those Fellows who have memorialised Mr. Reginald Harrison to allow himself to be nominated as a candidate would seem to attach considerable importance to the "opinion that the claims of provincial surgeons to representation on this occasion should be considered," and that Liverpool especially should have a representative. Mr. Harrison had, of course, no alternative but to accept the invitation, which was signed by 170 Fellows. It may be well to state that the provincial Fellows already constitute one-sixth part of the Council, and that if both Mr. Cadge and Mr. Harrison are elected the proportion will be raised to one-fourth.

NURSING AT GUY'S.

THE current number of the *Nineteenth Century* contains three articles on "Doctors and Nurses," written respectively by Dr. Octavius Sturges, Dr. Seymour Sharkey, and Miss Lonsdale. The last-named will naturally attract most attention, since it is confessedly a reply to the articles which appeared in the May number of the *Nineteenth Century* and the *Contemporary Review*. Miss Lonsdale regrets that she allowed her strong feeling in the matter upon which she wrote to cause her to use language which imputed unworthy motives to the medical men who support the old system of nursing in opposition to the new, and she declares that she had no idea or intention of asserting that in some ways the nurse knows better than the doctor what is good for the patient. She also defines the meaning she attaches to the phrase "sisters in the proper sense of the word." This has, it appears, nothing to do with religious sisterhoods, with which Miss Lonsdale disclaims all past or probable connexion, but with the beautiful sentiment of sympathy and kindness to her patients which the nurse "would feel and show towards her own brothers and sisters." Miss Lonsdale still adheres, she says, to the main issue of what she publicly stated on the subject of the old and new systems of nursing. No one will impugn her right to do so; and if the tone of her first article had been as temperate as that of the second, Miss Lonsdale might now have reckoned among her sympathisers and supporters many whom her strong language completely alienated.

HOTELS AS RESIDENCES.

ONE of the most striking developments of modern life is the increasing custom of large sections of our population to make hotels their residences, not merely for a few days or a week, but for months, and even *en permanence*. This practice is not merely spreading among individual members of the male sex who do not choose to take upon themselves the troubles and responsibilities of a household, but families, whose circumstances or inclinations lead them to the metropolis or seaside for a month or two in the season, or who habitually divide their time between three or four favoured resorts, are now adopting this plan of living. In many respects hotels present great advantages, and residence, in contradistinction to a mere stay of a few days, is increasing in favour daily. Next in importance, therefore, to the domestic and sanitary arrangements of our homes come those of our hotels, and as each new addition is made to these huge buildings, improvements in accordance with the progress of sanitary knowledge become more and more imperative. The formal opening of the Grand Hotel, Trafalgar-square, by the Lord Mayor and Sheriffs on the 29th ult. was, therefore, an event of some interest from our standpoint, and we were glad to find that domestic comfort and health considerations have been well attended to. The most important innovation is the placing of the kitchens in a distinct portion of the upper part of the building, as remote as possible from the sitting-rooms and bedrooms, and in separate communication with the public and private dining-rooms. The advantages of such an arrangement are self-evident. To all the principal suites of rooms special bath-rooms and lavatories are attached, in addition to those placed in the general corridors. These have all been fitted by Mr. George Jennings, of Lambeth, and are models of simplicity and perfection in working. The ventilation of the private sitting-rooms and bed-rooms has not been neglected, and the

large public rooms are remarkably lofty and airy. We would point out that in future buildings of this class the smoking-room must also be removed from the lower part of the building, for no plan of ventilation will make amends for a situation which is inherently wrong. When the idea is fully grasped, that the future of large hotels depends to a large extent upon their suitability as residences, smoking-rooms, billiard-rooms, &c., will be relegated to a detached part of the building, or will be placed in the upper story, as in many of our modern clubs.

SALICIN AND THE SALICYLATES IN RHEUMATIC FEVER.

THE communications read before the Clinical Society last week by its President, Dr. Greenhow, were interesting from the doubt which was thrown upon the efficacy of the prevalent treatment of acute rheumatism. After a careful and extended trial of salicin and the salicylate of soda in this disease, he concludes their benefit to be counterbalanced by their toxic effects; and he has been forced reluctantly to admit that these drugs cannot be considered to have much advanced our therapeutics of the disease in question. These conclusions deserve, and will doubtless receive, full attention in view of the position of their author, and of the minute scrutiny to which he has subjected the facts before him. For in spite of the mass of literature that has grown up around this particular treatment, in spite of the numerous statistical analyses which have been made to prove that in the employment of these drugs in rheumatic fever we had at last got hold of remedies more certain in their action, and more favourable in their effects than any that have hitherto been employed, it must be admitted that there is growing up an impression that their value has been much overrated. At the Cork meeting of the British Medical Association last summer some members ventured to raise such doubts and to inculcate caution in the administration of these drugs, hinting darkly at their toxic qualities. Dr. Southey has recently written strongly in the same sense, and we have now to add Dr. Greenhow's experience of a large number of cases treated under the same conditions of environment, diet, &c., to this category of scepticism.

Briefly summed up, Dr. Greenhow's conclusions are these: The drugs are most powerful antipyretic agents; as a rule, within a few days of their administration the fever abates, the temperature falling to normal. Almost as speedily, and often more so, does pain leave the affected joints. But the complications of rheumatic fever do not seem to be averted by them. Evidences of cardiac failure often call for the withdrawal of the drug; or its toxic effects are shown in other ways—in deafness, delirium, headache on the side of the nervous system, or gastric irritation on the side of the digestive system. Relapses are very frequent; partly perhaps on account of the necessity of reducing both the dose administered and the frequency of its administration, and partly from the fact of the natural tendency of many cases of rheumatic fever to relapse—in spite of treatment, medicinal and dietetic. Nor has Dr. Greenhow found the duration of the disease to be diminished, but if anything prolonged by these drugs, which leave the patient more anæmic and debilitated than other modes of treatment. This forms on the whole a heavy indictment, and one not easily gainsaid. The question comes to this, Is the relief gained by early diminution of the febrile symptoms and abatement of pain sufficient to put in the scale against the many and obvious drawbacks of the use of the drugs?

Before, however, consenting to commit salicin and salicylates to the limbo which has received so many other methods of treatment of acute rheumatism, which each in turn have had their day and ceased to be, it is comforting to find physicians like Drs. Cavafy and H. Weber expressing their continued confidence in the use of these drugs. Dr. Cavafy, indeed, relies upon almost heroic doses, and thinks but lightly of their toxic effects. It seems that more light is wanted in the direction alluded to by Dr. Powell, as well as the discovery of the minimum dose capable of producing the good effects of the drugs—a dose which can be maintained for a long period and be tolerated by the patient, so that by keeping up its continuous administration the tendency to relapse may be obviated. It can hardly be said that we have reached this yet. It may be that neither salicin nor the salicylate of soda is capable of such effects; that, as Dr. Greenhow showed in his cases, the therapeutical effect can hardly be produced apart from the toxic effects, although we would fain hope that there is a *via media* in the matter. Perhaps, too, the combination of quinine and salicylic acid introduced to notice by Dr. Hewan may prove more reliable, although the preparation is one of the costliest in pharmacy. At any rate, it is incumbent on physicians to endeavour to submit these drugs to continued careful study, and not to rely upon mere *impressions*. Our own feeling is and has long been in favour of the salicylic treatment as compared with other methods; but had the facts at our disposal been as profoundly scrutinised as those of the President of the Clinical Society the impression might have been found to be baseless after all.

"CRUELTY TO WOMEN."

MANY of the West-end firms still hold out in their obstinate determination not to yield either to entreaties or remonstrances, and provide seats for the use of the young women in their establishments during the intervals of actual business, so as to take the strain off the organism and spare it the specially-induced maladies which long standing so commonly entails. The heads of these houses are respectable and humane individuals, and in their personal capacity would not wantonly injure a fly, much less would they sacrifice the life, or even the health, of a fellow-creature to their own advantage or caprice. The shop-walkers who administer the laws which make miserable victims of disease and suffering are equally estimable personally, and many of them have daughters of their own for whose care they are naturally solicitous. How, then, does it happen that these two classes of persons continue to keep up a system which is not either too sensationally or too strongly designated "cruelty to women"? The answer is, first, that the retail shopkeeper would fain persuade himself, and have his customers believe, the ordinary business of a first-class establishment cannot be successfully conducted unless those who work behind the counters and in the show-rooms are kept standing with a show of occupation throughout the long hours during which the shop is kept open. Humanity has to give way to *business*. Another class console themselves with the fact that they *do* provide seats, and are oblivious of the fact that the young women are so hounded by their shop-walkers that they cannot use them. The public is not humane. Ladies do not care for the health of their servants. If there had been any real feeling of sympathy for the young persons who are year by year pining away under this system it would long since have been brought to a summary close. Shopkeepers may persist in their obstinacy with impunity. Their customers will not interfere. If fashionable ladies saw a dog or cat worked and worried into its grave they would possibly bestow a little feeble emotion on the spectacle, albeit the pigeon-shooting entertainments so much enjoyed by the sex reputed gentle (!) do not indicate the existence of any superfluous sympathy for suffering in feminine nature. We sometimes hear of women having a special faculty for nursing the sick. Let them show in this matter of the wrongs of their own sisters standing painfully behind the

counters and in the showrooms of West-end drapery establishments for *their* gratification, that they have, at length, the humanity to avoid the creation of needless sickness. Is it necessary that we should go more fully into details, and give the statistics of cases of agonising and incurable disease distinctly caused by the cruelty to women which consists in keeping girls needlessly standing when health and even life might be saved if only imperious ladies and selfish or careless tradesmen would allow them to sit?

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AT a large and influential meeting of the Fellows, held on the 31st ult., an important motion by Dr. Brunker in reference to the election of the President, Vice-president, and Council was under consideration. Dr. Brunker, who had some weeks previously brought the matter before the Council without success, modified the resolution of which he had given notice, and proposed one to the effect that as about one-fourth only of the Fellows, in consequence of the provisions of the Supplemental Charter, were able to vote at the annual elections, their personal attendance being necessary, they were denied those privileges which it was intended they should enjoy; and that it was for the interest of the College and the Fellows to remedy these defects. For this purpose it should be recommended to the Council to prepare a memorial to the Queen, praying that the Supplemental Charter be amended so as to permit all Fellows to vote by proxy or voting-papers for the election of the President, Vice-president, and Council. Various reasons were put forward by the provincial Fellows in favour of the proposed change, and it was urged that the funds of the College would be increased, as many Fellows would be added to the College if the resolution were adopted. On the other hand, it was pointed out that voting by proxy was undesirable, and that if application was made for a change in the Charter it would be attended with great risk to the well-being of the College. On a division being taken the resolution was lost by a large majority. It was then proposed that, in order to accommodate Fellows residing at a distance, the Council be recommended to take steps to arrange for the annual meeting of the College on the Saturday preceding the first Monday in June, the day selected by the Charter for the annual election of office-bearers. This resolution was proposed by Mr. Jacob, seconded by Professor Macnamara, and unanimously adopted.

INSANITY: ITS COST AND CONSEQUENCES.

MR. STANLEY LEIGHTON has given notice of the following motion in the House of Commons:—"That the case of the insane is a subject of Imperial and not Local obligation; that the placing of insane persons, not of the class of paupers, in the category of paupers on account of their insanity, is inexpedient; and that the cost of maintaining lunatic asylums is an unfair burden upon the ratepayers." These separate propositions are of great interest, but we scarcely think the House of Commons will spend much time over them in an abstract form. Whether insanity should be paid for—when the patient or his friends cannot afford the payment—out of imperial or local taxes; whether an insane patient that has to be maintained and treated at the expense of the public should thereby be pauperised, are very difficult questions. When a patient with infectious disease is compelled to go to a hospital for purposes of isolation, he goes as much in the interest of the public as of himself and his family. It may therefore be argued that the public should bear the expense of his going. But even here we are trying to recover from the patient and his friends, if not actual paupers, the cost of maintenance. In the case of the insane the public has not the same interest in isolation. But it has some, and the State would easily be induced to take a humane view of its duty to sympathise with those afflicted with the huge calamity of insanity to the extent of providing for their comfort and treatment on the most reasonable and least discreditable terms. Provision for inevitable and urgent wants is more or less a State duty. At any rate it should be within the care of the State to facilitate as much as possible such provision. Insanity implies such wants, and should largely command the care and sympathy of the State. Few lots can be harder than for an insane person of fair position and intelligence to have to be pauperised in order to be treated, and to have to herd with veritable paupers in a state of insanity.

MORE TRAINING-SHIP COFFINS.

IT is really sad to have to write indignantly on the subject of "training-ships," but something must be said or done to avoid the repetition of what has twice proved a cruel blunder. We are not concerned with the opinion expressed by naval men, to the effect that *old* ships must be used for training purposes because no new ones exist in which boys can learn seamanship. Surely England is not so poverty-stricken that she cannot afford to build one wooden frigate, or if need be two such vessels, for sea-going purposes! It is a scandal to our humanity that crazy or cranky hulks are sent to sea with a freight of human lives, because we have no modern ships that will sail, or can be handled by seamen. We have already condemned the system of sending ships to sea for simply training purposes. We think the practice is absurd and unsafe; but if, as it is rumoured, a third unseaworthy—or even questionable—ship is to be told off for this "duty," the sooner some independent member of Parliament takes measures to have the project fully discussed the better. We cannot, in common decency, squander more lives.

HOT-AIR BATHS.

NOW that the hot-air bath has been fairly naturalised in England, it is necessary to examine the institution critically. One of the most obvious sanitary conditions of the bath, but, unfortunately, that which it is most difficult to secure, is the purity of the atmosphere in which the breathing organs of persons in a peculiarly susceptible or physiological state are immersed. The breather of impure gases under ordinary circumstances takes his poison largely diluted. If the air of a Turkish bath is laden with germs of disease thrown off from the lungs of a fever or a consumptive patient, there are no currents to carry the particles away. It is a physical certainty that others breathing in the bath must inhale them. This is an evident source of peril, and suggests the wisdom of taking measures to ensure the frequent changing of an atmosphere which may be thus easily polluted. Care is also required to compel those who conduct such baths in the way of trade, to provide attendants who not only can but *will* do what is necessary for the bathers. For example, if cold water is ordered for a patient, he or she should not be deprived of the full benefit such an application may be likely to afford, because the attendants are too indolent to procure the requisite appliances, as recently happened at a well-known bath.

CONSULTATIONS WITH HOMŒOPATHISTS.

IN THE LANCET of May 1st (p. 702), a Fellow of the Royal College of Surgeons in Ireland suggested that the Council of that body should adopt a resolution to the effect that meeting homœopathists in consultation was beneath the dignity of the Licentiates and Fellows of the College. That this proposal was not premature is evident from what took place at the annual meeting of the Fellows of the Irish College of Surgeons last Monday, when Mr. Tufnell drew attention to the matter as contrary to the ordinances of the College, which distinctly prohibited any consultation

between its members and those practising homœopathy or mesmerism. He believed that it was necessary to impress the existence of such prohibition upon the minds of the members, and proposed a resolution that they should not, directly or indirectly, have any professional communication with such persons. Dr. Carte seconded the resolution, which was passed without a dissentient. In the ordinary course the resolution will come before the Council of the College. Mr. Tufnell only brought the matter forward in a general way, but he is prepared to give details should it be necessary. We hope, however, that this warning will be sufficient, and that the delinquent or delinquents referred to will for the future think more of the dignity of the College they are connected with than of their pecuniary interests.

PUBLIC WORK-ROOMS.

IT would be difficult to point to a more probable source of infection in the search for "causes" of disease in private families than the houses where the practical work of dressmaking is performed. Ladies may not fully realise the danger to which they and their children are exposed; but a visit to a few of the residences of poor women who work for the large shops, or for private families, would suffice to place the facts beyond question. The poor ought not to be blamed for their poverty, or discouraged from the laudable endeavour to get their living honestly and honourably. Why cannot this evil be dealt with by the provision of public work-rooms under proper inspectors, somewhat on the plan of the baths and washhouses? It would not be costly or difficult to provide large, well-ventilated, and suitable buildings in districts conveniently near the residences of the humbler class, where women might take their work, and each in a little stall of her own labour in peace and cleanliness. A very trifling sum by way of hire money would suffice to cover the cost of keeping such a building in good condition, and a small rate would defray the expense of insuring the contents against fire, so that each worker might leave her materials in safety during the night. Each compartment would be let by ticket at the door on application, as admission is granted to a public washhouse, and there would be no expense to the industrious poor unless actually "in work." This ought to be the next reform. We invite the philanthropic who really desire to do good service to help us in giving this enterprise a start. The proposal is of moment, and the time propitious for setting it afloat.

HYDROPHOBIA.

THERE is a proverb regarding new brooms which we should like to see verified, in one respect at least, by the present Government. It has been in vain apparently that attention has been called, over and over again, to the prevalence of hydrophobia, and to the certain diminution which would follow the wide diffusion of knowledge regarding the early symptoms of rabies in the dog. We fear that no legislative enactments would make a "clean sweep" of the disease from amongst us, but at least its occurrence among animals and human beings might be made far rarer than it is. The evil is still pressing. In the neighbourhood of Cardiff a rabid dog, last week, ravaged the country, and inflicted bites which will, not improbably, result in a very serious outbreak. A dog belonging to a butcher wandered about away from home, and after some days bit a man at Pyle. On the next day he was found lying on the door of the school at Tarbach, and bit the schoolmaster severely in the leg as he was coming out. He next attacked a little girl, biting a part of her ear off, and further on he bit a boy in the arm. He then went off to Aberavon, where he bit another man, and then a little boy — the latter severely in the face. Some men then started in pursuit, and ultimately the dog was shot. How many animals, dogs, &c., the creature bit during his days and nights of wandering the account does not say, but certainly not a few. The moral of the sad story is this. Rabies always manifests itself, before the tendency to wander comes on, by characteristic symptoms, which have often been described in these columns and elsewhere. Hence it is practically certain that, had the owner of the dog been aware of the indications of the disease in its early stages, the frightful ravages described might have been prevented.

TEA FLAVOURINGS.

IT would be interesting to know what the preparers or vendors of cheap teas are using to flavour the varieties they offer in eager competition to please the palates of their customers, and win public support. If it be only a little finely chopped orange peel, or any simple material of that class, no harm is likely to come of the artifice; but there are always dangers lurking in the practice of adulteration, even when it is carried on under cover of a clever admixture of simple elements to produce a delectable result. It should be unnecessary to caution the trader in tea that cunningly prepared herbs and twig-chippings may include poisonous substances, and some of the phenomena which have been observed since the reduction of prices and the increased consumption consequent on the revulsion of "feeling" against alcoholic beverages has set in, suggest the need of caution both on the part of those who prepare "choice teas" and "mixtures," delicately flavoured, for the public, and the customers who confidingly consume them—not, we fear, without grave risks.

MEDICINE IN RUSSIA.

ACCORDING to a return of the Medical Department of the Russian Ministry of the Interior, the number of medical men in Russia in 1878 was 13,475, of whom 2035 held the diploma of doctor of medicine. In the course of 1878, 371 medical men were reported to have died, and 690 authorised practitioners were added to the official list. In addition there were 5100 "sous-chirurgiens," 2666 midwives, and 1652 pharmaceutists. The population of Russia is roughly estimated at 80,000,000.

A GRACEFUL ACKNOWLEDGMENT OF HOSPITAL SERVICES.

THE thank-offering of Mr. Henry Edwards, M.P. for Weymouth, to St. Bartholomew's Hospital is a graceful act which should not be allowed to pass unnoticed. Mr. Edwards had the misfortune, a few months since, to break one of his legs at the Cannon-street Station, and was conveyed to St. Bartholomew's, where he received the attention which sufferers of all grades of society experience in our medical charities. In acknowledgment of the service rendered to him, Mr. Edwards has forwarded to the treasurer of the hospital a cheque for £500 towards the Samaritan fund.

DR. BURGGRAEVE.

ON the occasion of the visit to London of Dr. Burggraeve, Emeritus Professor of Anatomy and Surgery of Ghent University, and Member of the Royal Academy of Medicine of Belgium, several eminent members of the profession met on the 27th ult. at the residence of Dr. Phipson, to listen to a discourse by the veteran Belgian professor, in which he disclosed the history of his researches upon the alkaloids, and their application to the treatment of diseases, by what is termed the dosimetric method.

Professor Burggraeve, in spite of his seventy-four years,

addressed the meeting with wonderful fluency, and without the slightest fatigue, for upwards of two hours, illustrating his remarks by numerous interesting cases taken from his own practice. His object was to show how such powerful agents as strychnine, hyoscyamine, aconitine, atropine, digitaline, and veratrine, can be applied in medicine as safely and efficiently as quinine. He demonstrated their action in fevers of all kinds, and in other forms of disease, and insisted energetically upon the necessity of a complete reform in our present system of therapeutics.

Nature says, "It is a fact worth noting that M. Chevreul, who is now in his ninety-fifth year, has begun his course on Chemistry at the Paris Museum of Natural History, with as much apparent zest and energy as he did fifty years ago, when he first entered on his duties of that chair. The programme of his course, *Les Mondes* informs us, is beautifully and firmly written in his own hand. Notwithstanding his approach to the centenary, he still looks young and fresh."

AN accident, unattended, we are glad to learn, with any very serious consequences, occurred last week to Dr. Wybrants, coroner for Somerset. Whilst riding, with his wife and infant child, in a pony carriage, the animal shied, and as a result the whole party were thrown out. Dr. and Mrs. Wybrants were much shaken, but their infant escaped altogether unhurt.

THE Seventh Triennial Handel Festival, which will be celebrated at the Crystal Palace on the 21st, 23rd, and 25th of June, with Sir Michael Costa as conductor, promises to be as successful as the Festivals which have previously taken place.

THE townspeople of Huddersfield are to be congratulated on having become possessed of a new park, the generous gift of Mr. Henry F. Beaumont, of Whitley Beaumont, a former representative in Parliament of the southern division of the West Riding.

SIR JOHN LUBBOCK was on Wednesday elected Member of Parliament for the University of London, in succession to Viscount Sherbrooke, on the nomination of Dr. Samuel Wilks, seconded by Dr. Frederick Wood.

THE noxious properties of the leaves of the yew, when ingested, has received fresh illustration by the death last week of two valuable horses, belonging to a gentleman in Willesbourne, from eating the foliage of the *Taxus baccata*.

AT a meeting of the Obstetrical Society, Professor Simpson and Dr. Angus Macdonald stated that in their hands Chian turpentine, as yet, had not been productive of benefit when used in cases of uterine cancer.

To the list of Vice-regal appointments, published last week, may be added that of Oculist-in-Ordinary to the Lord Lieutenant, an office which has been conferred upon Archibald H. Jacob, F.R.C.S.E.

WITH much regret we have to record the death of Samuel Messenger Bradley, F.R.C.S. Eng., of Manchester, which took place on the 27th ult., at the early age of forty years.

ON Friday, the 4th instant, an address will be presented to Earl Cowper, the new Lord Lieutenant, from the Royal College of Surgeons in Ireland.

A REUTER'S telegram announces the death of the Empress of Russia on the 3rd inst.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham (estimated population in 1879, 388,884).—Dr. Alfred Hill reports a birth-rate of 40·0 per 1000 population, and a death-rate of 21·8, in this borough for 1879. The death-rate was markedly below the average (24·9) of the six preceding years. This satisfactory improvement in the rate of mortality of the borough Dr. Hill attributes to a low summer temperature, with its consequent smaller mortality from diarrhœa, a total immunity from fatal small-pox, a diminution of the severity of scarlet fever and whooping-cough, "a not too flourishing condition of trade, which is apt to lead to intemperance and excess"; and, finally, to the many sanitary works carried out by the department presided over by the Health Committee of the Corporation. The death-rate given by Dr. Hill will, he cautions the reader of his report, be found somewhat lower than that given by the Registrar-General, because the latter includes among the deaths in Birmingham paupers belonging to the borough who died in the workhouses situated outside the municipal boundaries. The infant mortality was as low as 15·0 per cent. of the births, owing doubtless to an unusually small mortality from diarrhœa. Of the principal spreading diseases there was little of special importance to write as to extent of prevalence during the year, but the general observations on typhoid fever are of interest. Dr. Hill notices the gradual decline of mortality from "fever" from 0·63 per 1000 population per annum in 1870 to 0·22 in 1879, and a corresponding decline of typhoid fever: "I have in previous reports remarked upon the gradual decline in the cases of typhoid fever from year to year—a decline not confined to Birmingham, but exhibited by the generality of the great towns of England, and possessing all the more interest that it is an undoubted—perhaps the best—indication of the improved, and improving, general state of towns, the result of sanitary work systematically carried out. It is impossible that such a progressive improvement in the large towns generally, and in Birmingham in particular, can be the result of a series of happy accidents; it is only one of the many incidents marking sanitary progress, such as the partial or complete banishment of diseases like plague, typhus, ague, and small-pox, and, like them, it clearly shows the possibility of overcoming the other zymotics, such as scarlet fever, measles, whooping-cough, and diphtheria, when we shall become sufficiently informed upon their nature, and careful enough to apply the knowledge." The mortality from diphtheria has undergone almost as marked a diminution in Birmingham since 1873 as "fever." Both diphtheria and typhoid occur in Birmingham at all times of the year, and never as a sudden epidemic, and both diseases are distributed generally over the town, manifesting no special habitat. Their prevalence would appear to have no particular relation to elevation, to the condition of houses as to general cleanliness, to dampness of houses, privy accommodation or filth from animal-keeping in and about houses, but to have, as chief condition of occurrence, the action of *drain air*, we presume arising from particular defects of drainage. Birmingham would clearly appear to be slowly, but surely, remedying its sanitary shortcomings in detail; and the effects of the work already done in this direction are now making themselves manifest in the diminished and steadily diminishing mortality of the borough, and the greater control obtained over the spreading diseases most markedly fostered by local insanitary conditions. In few things will this detailed amendment of the sanitary condition of the borough be more marked than in the abolition of the old offensive midden privies which is in progress, 3055 pans having already been substituted for many of those unwholesome receptacles.

Cannock Union Rural Sanitary Authority (area of district, 55,222 acres; population, 1871, 13,459).—Mr. Fredk. E. Manby reports a death-rate (estimated on the population of 1871) of 19·47. No fatal case of enteric fever occurred in his district during the year, and there was a considerable diminution of infantile mortality. The most prevalent

malady of the zymotic class was scarlet fever. Mr. Manby observes that the breast-suckled children of a healthy population ought not to die in anything like the proportion they do in his district, and he proposes, with the Sanitary Authority's consent, to prepare and circulate some plain rules on the management of infants, including their feeding. This is an example which might be more largely followed. The Sanitary Authority appears to be somewhat in the background as to matters of disinfection.

THE SANITARY CONDITION AND ADMINISTRATION OF THE ISLE OF WIGHT.

We are glad to learn that, under instructions from the Local Government Board, Dr. Ballard, of the medical department of that Board, is engaged in making an inquiry into the sanitary condition and administration of the island. Visitors to the island, who have taken the trouble to look a little behind the scenes, have had forced upon them the unpleasant truth that the inhabitants have been and are too commonly disposed to leave everything in health matters to the natural advantages the island gives to them, and hold these advantages so highly as to exonerate them from all serious care for avoiding or abating sanitary evils of their own creation. Moreover, the sanitary administration of the island appears to be especially contrived to perpetuate unwholesome conditions at the cost of the inhabitants and of visitors.

The state of the island in these matters has long needed inquiring into, and the investigation in which Dr. Ballard is now engaged will no doubt give the information which is needed. Hitherto it has been too largely the case that the community of health-resorts have substantially held that they possess a sort of right to counteract by their sanitary indifference and carelessness the advantages to be derived from their favoured positions. This ignorant short-sightedness is passing away, but not so rapidly as it might do; and visitors, upon whom so much of the prosperity of these resorts depends, would be well advised to cease visiting so-called health-resorts until they have some assurance that their sanitary authorities are doing all in their power to remove and prevent the recurrence of unwholesome conditions there.

LOCAL GOVERNMENT AREAS.

The Bill brought into the House of Commons by Mr. Pell and others for the appointment of a Commission for the alteration of areas of Local Government in certain cases, and for the rearrangement of the boundaries thereof, deals with a difficult subject, but one which may be regarded as the first step to a reconsideration of Local Government areas generally. The Bill provides that the Commissioners to be appointed under it shall be empowered to effect the following objects, to wit—1. That no poor-law parish or union shall extend over the boundary of any county. 2. That no poor-law parish shall be divided into isolated parts. 3. That no poor-law parish shall be of so small a size or have any part or parts thereof so situate as to render the administration of the relief of the poor in or the local government of such parish or part or parts thereof in the opinion of the commissioners inconvenient. 4. That every highway parish shall be coincident in area with some poor law parish. 5. That every highway district shall be coincident in area with some rural sanitary district. And the Commissioners are to deal with all cases where they think it necessary to alter any areas, and to adjust any boundaries in order to effect the objects aforesaid, and shall frame schemes and make orders in relation thereto, subject to and in accordance with the provisions of this Act.

The Bill provides that powers possessed by the Local Government Board and County authorities for altering areas shall be suspended during the times the powers exercised under this Bill by the Commissioners are in force, except at the request of the Commissioners.

REGISTRATION OF DISEASE.

The report of the medical officer of health for the borough of Huddersfield for the four weeks ending May 1st, 1880 (and dated the 12th ultimo), presents the singular characteristic of being based solely upon the returns of mortality for the district to which it refers. The registration of diseases, which has now been three or four years in force in the borough, does not appear to furnish one item of information which the medical officer of health can make use of in his report, notwithstanding that the deaths include two from scarlet fever and three from measles, and a considerable epidemic of the latter disease having been prevalent during the month. How is this to be explained? What advantage, if any, is Huddersfield gaining from its power to enforce notice being given to its sanitary authority of the occurrence of certain classes of disease? Is the advantage so slight that the information gives no help to the medical officer of health in framing his monthly reports on the health of the town? If so, how justify prosecutions of medical men for withholding information, as in the case we described last week?

VINDICATION OF A MEDICAL OFFICER.

The Committee appointed by the Penistone Guardians to inquire into certain charges of neglect preferred against Dr. Duncan, medical officer for the Denby district, have given in their report. The committee state that having at great length taken the evidence of parties alleged to have been aggrieved, they unanimously agree that the charges are incapable of being sustained, and that the inquiry has failed to establish or show any neglect of duty on the part of Dr. Duncan.

A correspondent signing himself L.R.C.P. has written to the *East London Observer*, complaining of a large mercantile vessel entering the Victoria Docks with cases of virulent small-pox on board. He thinks there must have been some carelessness on the part of the sanitary authority responsible for the health-welfare of the port that this should have happened. Having regard to the efficiency with which the Port Sanitary Authority have usually worked, we are inclined to think that the writer has penned his note under some misapprehension as to the conditions under which their work has to be effected.

Dr. Whitmore, in his monthly report for Marylebone, dated 12th May, 1880, reports the death of five young infants from having been accidentally overlain and suffocated in bed. He observes on this, that it is "by no means of unfrequent occurrence, so frequent, indeed, as to merit especial notice. It is not difficult to imagine," he adds, "a big burly man going to bed in a state of intoxication in which his young infant—a puny baby of only two or three months old—is sleeping, who, to his horror, finds on awakening in the morning that he has overlaid his child during the night."

A Parliamentary paper has been published, called for by Sir George Balfour, and which shows Taxes or Imposts to the amount of £5,632,158, with a view to the consideration at a future date of the desirability of transferring these taxes or imposts from Imperial to Local Taxation. The list of taxes and imposts included in the return is curious.

We regret to learn that difficulties have arisen between the Sanitary Authority and the Board of Guardians of Stepney with respect to the cost of removing cases of infectious diseases to hospital. In many cases the line between the non-pauper and pauper cases appears to be very ill-defined, and each authority is desirous to throw the responsibility upon the other.

AT a meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, on June 1st, it was resolved that a petition in their name should be forwarded to the House of Commons, in support of the Medical Charities (Ireland) Bill now before the Legislature.

VITAL STATISTICS.

FEVER DEATH-RATES IN SCOTCH TOWNS.

The Registrar-General has just issued a supplement to the Monthly and Quarterly Returns for Scotland, which contains a summary of the mortality statistics for eight of the largest Scotch towns during 1879. The death-rates from all causes during last year in these eight towns per 1000 of the estimated population ranged from 19·6 and 20·3 in Edinburgh and Leith, to 24·7 and 30·6 respectively in Perth and Paisley. Comparing these rates with the average rates in the ten preceding years, we find that both Edinburgh and Leith, judged by their death-rates, are among the healthiest of these Scotch towns, while Paisley stands at the bottom of the list, whether judged by its average rate in ten years,

or by its rate in 1879. It is very generally admitted that the death-rate from fever (including the fatality of typhus, enteric or typhoid, and simple continued fevers) affords a fair test of sanitary condition. It may be useful, therefore, to compare the fever death-rates in these eight towns, not only with each other, but with those in the large English towns for the same period. The death-rate from fever in the eight Scotch towns during 1879 averaged 0·36 per 1000 of the estimated population; while in twenty of the largest English towns the death-rate from fever did not exceed 0·29 per 1000. In the Scotch towns the death-rate from fever was equal to 0·26 in Dundee and Perth, 0·27 in Aberdeen, 0·35 in Glasgow, 0·39 in Edinburgh, 0·39 in Greenock, 0·49 in Leith, and was highest, 0·71, in Paisley. The excessive death-rate from fever in Paisley corroborates the evidence of unsatisfactory sanitary condition afforded by the death-rate from all causes. It is well known that in England the diagnosis of the various forms of fatal fever is very faulty. It would be interesting to know how far it may be relied upon in Scotland. The Scotch returns for the eight large towns show the classification of the fever deaths, from which it appears that during 1879 the deaths certified from typhus were 58 in Glasgow, 28 in Edinburgh, 19 in Dundee, 5 in Aberdeen, 17 in Greenock, 11 in Paisley, 6 in Leith, and only 1 in Perth. The proportion of fatal cases of typhus to the total deaths referred to fever was largest in Greenock, Paisley, and Dundee. Proportionally, the recorded fatality of typhus was considerably greater last year in Edinburgh than in Glasgow.

HEALTH OF LARGE ENGLISH TOWNS.

The death-rate in our large towns shows a further decline. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5540 births and 2887 deaths were registered last week. The births exceeded by 255, while the deaths were no less than 388 below, the average weekly numbers during 1879. The deaths showed a further decline of 62 from the decreasing numbers in recent weeks, and were equal to an annual rate of 20·1 per 1000, against 21·1 and 20·5 in the two preceding weeks. During the past eight weeks of the current quarter the death-rate in these towns did not average more than 21·3 per 1000, against 23·6 and 24·1 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·8 in Wolverhampton, 16·5 in Leeds, 16·7 in Hull, 18·3 in Portsmouth, and 18·5 in Leicester. The rates in the other towns ranged upwards to 22·6 in Oldham, 23·4 in Liverpool, 23·7 in Norwich, 23·8 in Newcastle-upon-Tyne, 25·9 in Manchester, and, the highest rate during the week, 28·6 in Salford. The excess in Salford was in great measure due to the fatal prevalence of zymotic diseases.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 439 and 400 in the two preceding weeks, rose 461 last week; they included 132 from whooping-cough, 131 from scarlet fever, and 90 from measles. The annual death-rate from these seven diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 0·7 and 0·9 in Leeds and Birmingham, to 6·7 in Sunderland, 7·6 in Salford, and 8·4 in Plymouth. Whooping-cough showed the largest proportional fatality in Newcastle-upon-Tyne, Manchester, and Liverpool; scarlet fever in Salford, Norwich, and Hull; and measles in Plymouth and Sunderland. The fatal cases of measles in Plymouth, which had been 23, and 2 in the two previous weeks, rose again to 10 last week. Five deaths were referred to fever (probably enteric) in Salford. Small-pox caused 10 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 186, 193, and 196 in the three preceding weeks, further rose to 218 on Saturday last; and no less than 50 new cases were admitted to these hospitals during last week, against 36 and 45 in the two previous weeks. Judged, therefore, by these hospital returns, small-pox prevalence in London is steadily increasing.

The fatality of lung diseases showed a further considerable decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 286 and 241 in the two preceding weeks, further declined to 208 last week, and were 46 below the corrected average weekly number; 116 were referred to bronchitis, and 60 to pneumonia. The annual death-rate from diseases of this class did not exceed 3·0 per 1000 in London last week, whereas the rate from the same diseases was equal to 5·1 in Liverpool, and 8·8 in Manchester. The weekly statement issued by the medical officer of health for Manchester is not, however, explicit as to whether "diseases of the lungs" includes phthisis.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 22·8 per 1000, against 24·8 and 23·7 in the two preceding weeks; it exceeded, however, by 2·7, or 13 per cent., the average rate in the twenty large English towns. The rates in the eight Scotch towns last week ranged from 15·6 and 20·3 in Aberdeen and Greenock, to 25·3 and 28·7 in Perth and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns declined to 108 last week, of which 41 resulted from whooping-cough, 25 from fever, 15 from measles, 12 from diarrhœa, and 11 from diphtheria. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 3·2; this zymotic rate, which was but 2·0 both in Aberdeen and Greenock, ranged upwards in the other towns to 6·4, and 7·8 in Paisley. Whooping-cough showed the largest proportional fatality in Glasgow and Paisley. The fatality of fever again showed a marked excess compared with that prevailing in the twenty English towns; the rate of fever mortality was largest in Glasgow, Dundee, and Perth. The 12 deaths referred to diarrhœa showed a further decline of 10 from the numbers returned in recent weeks. The deaths from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 131, 118, and 103 in the three preceding weeks, were 106 last week, and were equal to an annual rate of 4·3 per 1000; the rate from the same diseases in London last week did not exceed 2·6 per 1000.

THE HEALTH OF DUBLIN.

The 229 deaths in Dublin last week exceeded the numbers in recent weeks, and were equal to an annual rate of 38·0 per 1000, against 36·5, 35·0, and 34·2 in the three preceding weeks. During the eight weeks ending last Saturday, the death-rate in Dublin averaged no less than 36·3 per 1000, whereas in London during the same period it was but 20·1. When it is remembered that probably 9 per cent. of the deaths in Dublin escape registration, the excess of the recorded death-rate in that city becomes all the more noteworthy. Fifty of the deaths in Dublin last week were referred to the seven principal zymotic diseases, against 43 and 40 in the two previous weeks; 14 resulted from scarlet fever, 10 from fever, 9 from small-pox, 8 from whooping-cough, and 6 from measles. The annual death-rate from these seven diseases was equal to 8·3 per 1000 in Dublin, against 3·2 in London and 3·6 in Edinburgh.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE METROPOLITAN WATER-SUPPLY.

If the deputation from the Commissioners of Sewers of the City of London to the newly-appointed Home Secretary a few days ago, and before he had well settled down in his ministerial duties, on the subject of the metropolitan water-supply, appeared premature, at least it must now be said that the important body represented by the Commissioners has shown itself in earnest in the matter. At the meeting of the Court of Common Council on the 27th ult. a report was brought up from the Commissioners, and adopted, which showed that they had at once acted upon the suggestions made to the deputation by Sir W. Harcourt. The report stated that, without expressing any judgment on the provisional agreements entered into for the purchase of the water companies supplying London with water, they were of opinion that, as those agreements had been made after lengthened negotiations on the assumption that they were beneficial to the consumers, it was expedient that they should be carefully inquired into by a Select Committee of the House of Commons with a view of ascertaining whether all of them were to the advantage of the inhabitants of the metropolis, and

should be carried into effect, or whether the expenditure contemplated under the agreements for acquiring the existing supply might not be more profitably spent in procuring a new and better supply of water for London. They were also of opinion that the Corporation should be prepared to take part in the inquiry, and co-operate therein, and they drew particular attention, among the many defects at present existing in regard to the water-supply, to the basis of charge for water as requiring reconsideration and revision.

On the 28th ult. a deputation of the Metropolitan Board of Works had an interview with Sir W. Harcourt and Mr. Dodson, the President of the Local Government Board, on the same subject. This deputation urged that the Government should take a course, in respect to the agreements considered by the late Government, similar to that recommended by the City Commissioners of Sewers; but it further claimed for the Metropolitan Board of Works the management of the water-supply, and objected in the interest of the ratepayers to the creation of a new body for the purpose. The deputation, in addition, proffered every help the Board could give to the Government in promoting inquiry either as to the lately contemplated arrangement or as to the consideration of new schemes. Sir W. Harcourt, in addressing the deputation, was careful to state that the Government had not adopted the agreements in question, and that it did not either promote them or support them. They found them existing, and were willing that they should be inquired into. The agreements would be laid upon the table of the House, and the Government would be extremely grateful to the Metropolitan Board of Works for such help as it could give in coming to a clear knowledge of their character. The Bill of the late Parliament on the subject was dead, and the Government had no intentions, as at present advised, of reviving that Bill.

Since these deputations, the subject has come before the House of Commons, and the Home Secretary has received a deputation from the Vestries and District Boards upon it. On the 31st ult., in answer to a question from Mr. Brand, Sir W. Harcourt stated that the Government would ask the House to appoint a Select Committee to inquire into the character of the agreements considered by the late Government, and their actual relation to the value of the property to be acquired under them. They proposed also to submit to the Committee, as a proper subject for inquiry, the basis of the charge for water—that is to say, the basis on which the powers of the companies were founded, and which enabled them to raise their water rents without limit in proportion to the growth in the value of houses, without themselves expending any further moneys or rendering any additional services.

The deputation from the Vestries and District Boards saw the Home Secretary on the 1st inst. Mr. Beal, of St. James's Vestry, speaking for the deputation, observed that if the report of the proposed Select Committee should favour purchase, they strongly condemned a price which, from the fluctuations on the Stock Exchange, showed that a huge bargain in the interest of the companies, and not in the public interest, had been made.

With reference to the particular question of the supply of potable water to the metropolis from the chalk in the London basin, it may be noted that a boring at Wokingham has struck a very fine spring at a depth of 405 feet. This spring yields at the rate of 360,000 gallons a day, and fills the well shaft to within thirty feet of the surface. The water is stated to be very pure and clear.

INFECTION IN PRIVATE SCHOOLS.

A recent instance which has come to our knowledge of the break-up of a private school on account of the occurrence of a case of scarlet fever among the children, and of the scattering of the children east, west, north and south, and with them the scattering of the disease, leads to some serious reflections on the responsibilities of schoolmasters in this matter. In the case in question the schoolmaster holds himself aggrieved that neither the sanitary authority nor voluntary effort has provided within his locality hospital accommodation, which would enable him at once to isolate a case of infectious disease within his school, and so protect the remainder of the scholars, and avoid the almost ruinous loss of an enforced break-up of the school. But there is another, and, as it seems to us, simpler and more reasonable view of the question. Ought large schools for young children to exist unless they have proper arrangements for the isolation of occasional cases of infectious disease? We think not, and should strongly advise all parents to avoid sending their children to schools where so reasonable a precautionary arrangement as this is not provided. It surely was not contemplated in the Public Health Act that sanitary hospitals should be founded for the relief of private school establishments, although, the hospitals existing, and there being space in them at command, no objection could be raised against them being so used. Still less could it have been contemplated that charitable hospital foundations would be devoted to such an object. The responsibility of the provision should rest with the proprietor of the school, and we trust the day may come when this responsibility may be given legal force by having a place in an amended Public Health Act.

GLANDERS IN THE METROPOLIS.

Dr. Dudfield, in his last monthly report, gives us some interesting information as to the prevalence of glanders and farcy among horses in Kensington. Since he first directed attention to the subject of the presence of the malady in London stables, in consequence of the occurrence of glanders in certain persons in his district, the increased attention given to it has permitted him to arrive at a definite knowledge as to the amount of glanders prevalent in his own district. This is not so great as at first apprehended, but is sufficiently serious to call for more energetic efforts of repression than have yet been made. Dr. Dudfield is able to assure us that the prevalence of the disease in Kensington does not appear to be exercising any injurious influence on the public health. The disease is not generally disseminated among the horses in the parish, but is localised in certain mews, and among the horses belonging to limited classes of the population. He specifies two areas within which the disease is found, and within them it is almost entirely confined to the horses of certain omnibus and cab proprietors, "no case of glanders having been reported in any gentleman's stable or livery yard." The observation is suggestive as to the conditions under which the contagion is disseminated, and the causes of its localisation. The contagion is limited to certain stables, as it were, and is doubtless fixed there by certain ill-advised and uncleanly habits indulged in in those stables favourable to the maintenance of the malady by its propagation from horse to horse. Dr. Dudfield refers to the probable spread of the disease by horses drinking from common drinking troughs, and advises his Vestry to let every horse in their own stables (to which the disease had found its way) be watered from its own bucket. In Kensington 81 horses were slaughtered, for glanders (57) and farcy (24) in 1879; 55 (glanders 35, farcy 20) in 1880; and during the first three months of the year 5 have been slaughtered for glanders, and 37 for farcy.

SEA-WATER IN LONDON.

Whilst the Great Eastern Railway Company are to be congratulated upon the enterprise which brings the luxury of the sea-bath, at a small cost, and with little trouble, within the reach of the jaded Londoner, we should like a little more information with regard to the particular point off Lowestoft from which the sea-water they propose to furnish us with is drawn. Lowestoft is one of our watering-places that has preferred to discharge its sewage into the sea in close proximity to its own shores, instead of carrying it to a distance, as many towns have wisely done. Lowestoft has three main sewers—two for the old town, and one for the new. The chief sewer for the north town discharges into the sea off the Ness. As the tides ebb and flow north and south, the sewage is carried seaward in one direction or the other, according to the state of the tide. The other sewer for the old town, together with that from the new town, discharges into the harbour; part of this sewage is carried out to sea with the ebb, and part deposited in the harbour. Visitors to Lowestoft will remember the constant dredging that is constantly going on in the harbour, so that eventually the deposited sewage finds its way to the sea by means of the barges, which convey and discharge the harbour mud into the sea. We do not deny the possibility of obtaining pure sea-water at Lowestoft, but owing to the conditions we have alluded to, the greatest care ought to be bestowed on its collection. We hope the railway company will give ample information as to the point of intake of their supply, and the condition of the tide at the time of collection, otherwise the public will have no assurance as to the

purity of the water supplied. A trace of sewage-matter in the sea itself may not be injurious to those bathing in it, though the idea is unpleasant; but tinned sea-water may become objectionable in many respects. We should be sorry to see this valuable hygienic help to metropolitan life fall into disrepute from the want of a little forethought and prudence.

MEDICO-SANITARY NEWS FROM RUSSIA.

One of the most difficult problems to be solved in Russia is the sanitary organisation of zemstvos. The Russian journal the *Bereg* has some severe strictures upon the action which has been too commonly taken by the local authorities in this matter. It avers that they have given regard rather to some conspicuous exercise of their health-functions than to meeting the real health-needs of the population within the zemstvo. They have been more wishful to found "sumptuous" hospitals, and to introduce highly-trained medical men and nurses into the district, than to secure the services of medical men prepared to undertake the medical treatment of the peasantry, and of nurses accustomed to the habits and adapted to work among the lower classes of women. The result has been that the highly-trained men and nurses have been swallowed up by private practice, the hospitals have remained empty, and the class of the population for whom public medico-sanitary help was needed have profited nothing by the action of the local authorities. All this needs changing by the provision of small inexpensively-constructed hospitals, and by the obtaining of medical men and nurses whose services can be secured for the poorer classes.—The notices of diphtheria in the Russian press have latterly very much diminished in number and detail, and there is reason to believe that there has been a decline in the prevalence and severity of the epidemic. From Voronège it is reported that the measure adopted, with the aid of twenty medical students from the University, of thoroughly disinfecting infected cottages, has proved very efficacious. When the epidemic has come to an end, the local authorities propose to utilise the medical staff brought together for the purpose of combating it, in vaccinating generally the infants throughout the province.—Dr. Reich, of Betcbo, has left a sum of 12,000 roubles to the Academy of Medicine, St. Petersburg, in order to found two scholarships to be designated by his name.—The mortality return for St. Petersburg during the week ending the 24th April showed a considerable increase. The deaths from all causes were 805 (537 males and 268 females), typhus being credited 199, and pulmonary phthisis 126. The most numerous deaths were recorded at ages from twenty to twenty-nine years—"young people," the return says, "in the flower of their age."—The question of systematically sewering Moscow is under consideration by the local authorities of that city. A commission appointed to report on the subject held its first meeting on May 15th at the palace of the Governor-General. It was decided to appoint three committees to discuss and report upon the technical, sanitary, and financial aspects of the question respectively. The commission proceeded to elect the members of the several committees.

TYPHOID IN GLASGOW.

A very grave outbreak of typhoid fever has occurred in Glasgow and in the contiguous parish of Barony, at Possil-park. Dr. Russell, the medical officer of health for Glasgow, and Dr. Christie, the medical officer of health for Hillhead, have been actively engaged in making a minute inquiry concerning the source of the outbreak. The investigation has been unusually intricate, and is not yet complete, but pending the completion and publication of the reports we may state that, with regard to Glasgow, the outbreak occurred in some twenty or more local centres, varying in intensity, but all attached to milk-shops supplied by an agent into whose stock milk from an infected farm in Stirlingshire was being sent. The original epidemic is quite at an end, but a few secondary cases have sprung up, chiefly in families where children were slightly ill or the patients were treated at home. There are about 200 persons under treatment for enteric fever in Belvedere Hospital, nearly all of whom are victims of the late epidemic.

With regard to Possilpark, we may state that since the commencement of the outbreak of typhoid fever in this district of the Barony parish, in the second week of April, above ninety cases appeared among a population of about 5000. The greater number of cases were recorded from about the 10th to the 28th of the month; but from the middle of May only a few cases have occurred, which have evidently been the outcome of the previous outbreak. The general features of the outbreak in this district have also been characteristic of those which have been observed in different epidemic centres within the municipal boundaries of Glasgow, and there is still reason for the hypothesis that all have been connected with one common centre of origin.

ADULTERATED MILK.

Two cases have recently been heard before metropolitan police-courts in which milk carriers of certain dairy-proprietors were charged with having added more or less water to the milk in their cans, whilst engaged in carrying the milk to their masters' customers. Both cases were fully proved, and in both cases heavy fines were inflicted. The cases are of interest, as showing one of the ways in which milk may become adulterated, and which is most difficult to control and detect. In the country and in towns without a general water-supply, this mode of adulteration is, as a rule, of more serious consequence than in towns which have a general water-supply. In the metropolis, where the water used for adulteration would probably be drawn from the mains of a water-company, the liability of the milk causing mischief, apart from its impoverishment, would be slight as compared with the country, where the water might be taken from a road-side ditch, or pond, or polluted surface well. Few professional men, we apprehend, who have had the opportunity of seeing local outbreaks of enteric fever in the country, which there have been reasons to attribute to an infected milk supply, have not at times suspected that the source of infection was not in the dairy from which the milk came, but from some intermixture of the milk with infected water during the course of its delivery among the customers.

THE PUBLIC-HEALTH CONFERENCE.

The Annual Conference on Public Health, promoted by the Society of Arts, and which is to be held in the rooms of the Society on the 10th and 11th instant, under the presidency of the Right Hon. James Stansfeld, M.P., promises to be of exceptional interest this year. The programme of the Conference includes four subjects—to wit, 1, Administrative Organisation (including county boards; sanitary districts; election of sanitary authorities; and Local Government Board Inspection); 2, Amendment of the Law (including the Public Health Act, 1875, and the Pollution of Rivers Act); 3, Sanitary Inspection and Classification of Dwellings; 4, Further Suggestions by Sanitary Authorities.

At a public meeting at Menai Bridge on the 29th ult. it was unanimously resolved to apply to the Local Government Board for powers to establish a local board of health for the district, rather than allow its sanitary interests to remain under the control of the Bangor Union.

The lecture recently given by Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., at the Royal Indian Engineering College, Cooper's-hill, Staines, "On the Preservation of Health in India," is in the press, and will presently be published.

At a meeting of the guardians of the North Dublin Union, held last week, it was stated by the relieving officer that small-pox was so prevalent that there were no vacancies in the Hardwicke Hospital for further cases.

THE SERVICES.

INDIAN MEDICAL SERVICE.

IMMEDIATELY after the promulgation of the G.O. amalgamating the administrative staff of the British and Indian Medical Services, a Defence Committee was formed in London to take what steps they might deem advisable "to obtain compensation for what was clearly a very serious damage to the rights and interests" of the Indian medical officers. The committee issued a pamphlet under the title of "Brief Notes regarding the Indian Medical Service," which we brought to the notice of our readers (see THE LANCET of March 13th). They also issued, as we think

with more haste than judgment, a "Notice to Medical Students," with the object of preventing candidates coming forward for the service. When the G.O. regulating the civil medical service was brought out, it was found that the most serious objections to the amalgamation were removed, and the Committee were under the necessity of issuing a second edition of the notice, in which they confine themselves to a comparison between the army and the Indian Medical Services. They have also published some "Observations on certain features of the Grievances of the Officers of the Indian Medical Service, issued by authority of the Indian Medical Service Defence Committee." We do not consider it necessary to go into a detailed examination of all the statements contained in this document, but shall merely notice some of those which we consider well-founded grievances, and, as such, calling for modification. Of these we may mention the relative rank of the medical officers, which should at once be assimilated to that granted by the last Warrant to the medical officers of the British army. It is quite out of the question to have two sets of officers working together, similarly qualified and performing similar duties, and the one having an inferior rank to the other. It would be matter for astonishment that this anomaly has not ere now been remedied, were we not aware of the eccentric manner in which the affairs of our public services are regulated. The examination previous to promotion to the rank of surgeon-major should either be restored in the British or abolished in the Indian army. If it be necessary as an evidence that the officer has not been neglecting his profession during the earlier years of his service, and is competent for its duties in the higher grade, it must be equally so in both armies; if unnecessary, it should be at once abolished. The scale of temporary half-pay and of retiring pensions granted to the Indian medical officers demands immediate revision. The difference between the rates in the two services is very marked, and is, in our opinion, utterly without justification. The grade of Brigade-Surgeon should be introduced into the Indian army, both to prevent any unpleasant collision between the two services and the aggrieved feeling which may not unlikely be manifested when a Brigade-Surgeon of the British and an old Surgeon-Major of the Indian army are on duty together, and also to compensate for the loss of two appointments of Deputy Surgeon-General under the new *régime*. A more liberal share in the distribution of rewards and decorations is also imperatively required. It is little to the credit of the authorities in India that only one medical officer is entitled to wear the decoration of a Companion of the Bath in a service which has furnished so many distinguished and excellent officers.

In their Observations, the Defence Committee discuss the question of promotion to the administrative appointments by selection, instead of by seniority as heretofore, and make out of it a grievance on the part of officers not selected. Looking to the results of the old system by which a post of great responsibility was not unfrequently filled by a man who might very fairly be classed as much below mediocrity, we confess our sympathies to be in favour of selection. With the aid of public opinion, and the facilities afforded by the Press for exposing jobbery, we look forward to the system being worked with justice to the officers of the Department, and advantage to the public service. But to soften down the hardship to those who are passed over, the introduction of the new grade of Brigade-Surgeon, as above recommended, seems a measure alike of policy and justice.

Taking an impartial view of the recent changes as they bear on the Indian Medical Service, we think it has been decidedly a gainer by them, the loss of two deputy surgeon-general's appointments having been more than made up for by the new position given to the sanitary commissioners, their increased pay, and their attaining the rank of deputy surgeon-general on completing twenty-six years' service, or on the promotion of any officer junior to them to that rank. If the Indian Government will now take up the question of the grievances we have above noted, and will, we do not say in a liberal, but in an equitable manner, remedy them, we have no doubt of the Department continuing to maintain its popularity with the profession and drawing to its ranks from the medical schools an adequate supply of educated gentlemen well qualified to keep up the high reputation gained for it by their predecessors.

Surgeon-General C. A. Gordon, C.B., Principal Medical Officer Portsmouth Division, retires from the service on half-pay from the 26th ult., having reached the prescribed age (sixty years) when administrative medical officers are by late warrants placed on the retired list.

Deputy Surgeon-General W. A. Thompson, M.B., Army Medical Department, has been appointed Principal Medical Officer of the Northern District, York.

Deputy Surgeon-General Herbert Reade, V.C., has been placed under orders for the West Indies, and will relieve Deputy Surgeon-General S. Fasson as Principal Medical Officer at Barbadoes.

Deputy Surgeon-General H. Kendall has arrived from India, and been appointed to the Chatham District, *vice* Deputy Surgeon-General G. Pain, retired on half-pay.

The undermentioned officers are granted a step of honorary rank on retirement:—Deputy Surgeons-General to be Surgeons-General: Edward Courtenay Thorp, M.D., of the Bengal Army; dated Oct. 20th, 1879. James Irving, M.D., of the Bengal Army; dated Dec. 13th, 1879. George Hutchinson Ray, M.D., of the Bengal Army; dated Dec. 17th, 1879. John Robert Theobalds, of the Madras Army; dated April 1st, 1880. William Judson van Someren, M.D., of the Madras Army; dated April 3rd, 1880.—Surgeons-Major to be Deputy Surgeons-General: Charles James Sylvester, M.D., of the Bombay Army; dated Jan. 13th, 1878. Francis Day, of the Madras Army; dated June 2nd, 1880.

Correspondence.

"Audi alteram partem."

"OVER-EXAMINED AND UNDER-TAUGHT."

To the Editor of THE LANCET.

SIR,—I have read with much interest your able article in last Saturday's LANCET on Mr. Marshall's proposal to institute a compulsory examination in anatomy and physiology at the end of the student's first winter session. I must, however, confess I learn with a feeling of disappointment, shared I cannot doubt by many others, that your opposition to his scheme is as pronounced as it was nearly five years ago. After a period of active work in the dissecting-room which has given me unusual opportunities of close and prolonged intimacy with students, I venture to say I have never known a single student—and during the past few years I have conversed with many on this subject—who has not at once been willing to admit the great advantages which would follow such an examination. So far from students raising an objection, they would, I am convinced, be the first to welcome the change, as the very thing above all others which would give them the best stimulus to their work. Those who find they must differ from the opinions you so forcibly express might well rest content with such evidence as this in their favour, taking the problem as already solved and beyond the region of doubt. I think, Sir, if the able writer of your "leader" would spend an hour or two amongst the men who fill our dissecting-rooms and class-rooms, he would not long remain an opponent to Mr. Marshall's scheme. For what are the facts to which our schools bear witness? That a bare majority of students in their first year work well; that the rest work very indifferently, or after the first few weeks not at all. In the second year only the former become properly fitted for the College examination. A few, but a very few, of the indifferent workers are able by an effort to catch their colleagues; the rest become more or less "chronic."

Now, Sir, I feel convinced that a compulsory examination in elementary osteology and the anatomy of the limbs would entirely alter this unhappy state of things. Surely, the diligent student would find his best inducement to work in the near prospect of such a test, under the management of properly selected and authorised examiners. His success would be the reward he has striven for, and the proof to himself and his school that his labour has not been in vain. It would, moreover, give him what he could scarcely gain in any other way, the experience and confidence, and the self-reliance, for want of which good men occasionally fail. I question very much whether we should have to record much indifferent work. Few men join a medical school with the thought of being idle; it is all the other way. It is

just the want of a stimulus and the want of pressure—which an examination of this character would supply—which, I believe, is the main reason why these men drift into habits of idleness. Lectures, it is true, may do something, practical teaching may do more, but in my opinion an examination would do most of all to induce the bulk of our students to work, in the real sense of the word. Lectures become a farce when attended simply from necessity, and practical teaching loses much of its point when the knowledge taught must grow stale before it is wanted. It is true, as many teachers have suggested, that botany and chemistry might well be done with before the real professional work commences. It is, moreover, true that students waste time in learning how to work, but this is an evil that only disappears as knowledge and experience are gained by actual work, and this cannot be done *for*, it must be done *by*, the student himself. The sooner steady work is commenced the sooner these difficulties clear away.

Recognise the fact that the College of Surgeons has a paramount influence in shaping medical education, and admit that our teaching has to conform to its requirements—at least when it contemplates such a change as Mr. Marshall suggests,—it should receive the support of those who believe it will thus be giving to students the best and surest impulse to their work. It seems to me we shall never arrive at a scheme of education calculated to fit every mind and every capacity, and I apprehend this matters comparatively little if you insure the energy for work. This will bring with it success under almost any scheme. The present condition of things has resulted, I imagine, from the endeavour to attain this proficiency by compulsory attendance at lectures and in other ways. Mr. Marshall, I presume, sees this, and by a wise suggestion, and without altering materially the present system, has suggested a remedy. Is it not the lack of this energy which has made it necessary to institute class-examinations? These in one form or another have, I think, become the bane of the student's life. He seems ever driven along, with scarcely a moment he can call his own in which to do his work in his own fashion. All these encumbrances would disappear in the face of the college examination, and the teacher would be placed once again in his true relations to his pupils. We need, Sir, as you suggest, fewer examinations, and in this way we might get them. Our second-year's men might start with a really sound knowledge of osteology and the anatomy of the limbs. Such men would with ease, after a second session of work, be able to meet all the demands of the examiners. Of this I have no doubt; it is just the crowding of too much work in a small compass of time which leads to the necessity of cramming, and the evils which follow it.

I trust, Sir, the importance of this subject will be deemed a sufficient excuse for the length of this letter, and a plea in my favour for venturing to express so freely my own convictions. May I, as a teacher, add how highly I appreciate Mr. Marshall's aims in this matter of medical education? He has done much for science, he has done much for the College with which his name has been so long and so honourably linked. If he succeeds in his scheme he will, in my humble judgment, have done a work which will earn for him the gratitude and thanks of all grades of our profession.

I remain, Sir, your obedient servant,

ARTHUR HENSMAN, F.R.C.S.E.,
Senior Demonstrator of Anatomy at the Middlesex Hospital Medical College.

May 25th, 1880.

To the Editor of THE LANCET.

SIR,—From a recent notice of the proceedings of the Council of the Royal College of Surgeons, and from your leading articles thereon, I find that Mr. Marshall has again brought forward his proposition for the examination of students at the end of their first year.

Would you allow me to point out one or two considerations which should be weighed before such a motion be adopted?

The College of Surgeons is, as you state, only one of many examining bodies, and unless the examinations of other bodies be taken in lieu of its own, a still further increase in examinations is inevitable. This will be deplored by everyone who is conversant with the present unsatisfactory condition of medical examinations and medical education. The Council of the College of Surgeons seems to forget, or studiously avoids recalling the fact, that there are other bodies for which the student should be simultaneously preparing. Even now, from the undue preponderance of the influence of the College over teachers of medical students, many important branches of professional knowledge are neglected or postponed, and the one-sided diploma of the College has to be supplemented by any *other* that can be obtained as soon as possible. Hence the exodus to the Scotch Corporations for additional diplomas, and the wilful and persistent neglect by generations of students of such subjects as chemistry, botany, materia medica, forensic medicine, and hygiene, which although not apparently within the ken of the College of Surgeons, cannot be lost sight of by medical teachers.

The College of Surgeons is responsible for one of the lowest preliminary examinations which a student is called on to pass. My experience, Sir, as a teacher and examiner is that this is at the root of the whole mischief. We have but little trouble with pupils who have been well trained at school, but it is the ill-educated who get plucked time after time, and sorely try the patience of the teacher. The influence on teacher and other students exercised by such men does more to demoralise medical teaching than any other one circumstance with which I have been brought into contact.

We shall always, Sir, have a certain number of idle men amongst our students. I would ask the Council not to undertake the vain task of endeavouring to legislate for these: they can do much to prevent men being sent to us who have never "learned to learn," and who only degrade our teaching by turning us into routine grinders, instead of allowing us to teach our subject honestly and thoroughly, and with a reasonable latitude of independence.

The intelligent student gets on best the less he is hampered by the pressure of examinations, which, I would venture to say in the case of pass examinations, should be considered merely as safeguards for the public, and not as incentives to study.

Three examinations during the medical curriculum are amply sufficient for this purpose; and it is the duty of the council of every corporate body which grants merely a pass qualification, to see that the daily duties of practical work are not unduly interfered with. Examination has its advantages, but education, in the proper sense of the word, is infinitely more important.

The facilities for carrying out additional examinations in anatomy are entirely wanting. I presume that it is not intended to conduct these examinations without *subjects*; and the supply of these to examining boards even now seriously drains the dissecting-rooms.

I am, Sir, your obedient servant,

JOHN CURNOW, M.D., F.R.C.P.,
Professor of Anatomy in King's College, &c.

George-street, Hanover-square, W., June 1, 1880.

EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—I have waited to see if any abler pen than mine would challenge the statements made by Mr. Teevan in the Lettsomian lectures, delivered before the Medical Society of London, and reported in THE LANCET of April 17th, respecting operations upon the enlarged prostate. He recommended for advanced cases when catheterism is difficult and frequent, "excision of the obstruction as invented and practised by Mercier," and exhibited two drawings of instruments "for incising the muscular valve and excising the prostatic one." Consequently he accepted the responsibility of advising an operation which he allowed had never been performed in this country either by himself or any other person; an operation rarely if ever employed by more than one surgeon in Paris, and that many years ago, and now abandoned there. Mr. Teevan would appear not to have consulted its chief English literature. Twenty-two years ago Sir Henry Thompson in his work "The Enlarged Prostate" (1858), and again in the second edition (1867), which contained the Jacksonian prize essay, awarded by the Royal College of Surgeons for the preceding year, devoted a chapter to a summary of the various opinions and operations adopted in relation to this form of obstruction at the neck

of the bladder, *including Mercier's method*. There the whole subject is discussed at length, and *the very instruments now figured in* THE LANCET *are represented and described* (see pages 254–5, figs. 18 and 19; edition of 1858).

I have lately made special inquiry in Paris, and, from correspondence now lying before me, I am able to state that there is no evidence that these excisions or incisions of the neck of the bladder have ever been serviceable, while it is certain that they have been not only useless, but injurious. None of the leading surgeons, including Dr. Guyon, of the Hôpital Neckar, who, as your readers may know, succeeded Civiale in charge of the wards there devoted to urinary diseases, approves the proceeding, still less employs it. Surely Mr. Teevan should have looked into these facts before he ventured to state before a learned Society, and to repeat in your pages, that there are "hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition."

Further, he appears not to be aware that in Italy the attempt has lately been made to effect division by a heated galvanic wire for the express purpose of avoiding hæmorrhage known to have followed in some of the few instances in which Mercier formerly applied his proceeding in Paris. If any form of the operation be admissible, this alone appears to be entitled to consideration.

I am, Sir, your obedient servant,
G. BUCKSTON BROWNE.

Wimpole-street, W., May 31st.

Obituary.

ALFRED SWAINE TAYLOR, M.D., F.R.S.

THE announcement of the death of this distinguished toxicologist will be received by the profession with deep regret. Dr. Taylor had been in precarious health for some weeks, suffering, we believe, chiefly from heart disease, which, in spite of the most solicitous attention of his medical friends, terminated fatally on the 27th ult. The deceased physician was born at Northfleet in 1806, was educated at a private school, and studied medicine and surgery, under Sir Astley Cooper and Mr. J. H. Green, at the Hospitals of Guy's and St. Thomas's. After attending the medical schools of France, Germany, and Italy, he took the M.R.C.S. Eng. in 1830, and the M.D. St. And. in 1852, and in the following year was elected to the Fellowship of the London College of Physicians. Dr. Taylor was the first occupant of the chair of Medical Jurisprudence at Guy's Hospital, an appointment which he held till within a short time of his death. It was in connexion with this subject that his name was known all over the world, his works on "Poisons," "Medical Jurisprudence," and "Chemistry" being justly esteemed as standard treatises. As an authority in medico-legal questions his loss will be keenly felt by a large section of the community, whilst as a trusted physician and friend the place he has left vacant will not easily be filled.

MEDICAL NOTES IN PARLIAMENT.

THE SELECT COMMITTEE ON MEDICAL BILLS.

In the House of Commons on Thursday, May 27th, Mr. Errington asked the Vice-President of the Council whether he would move the reappointment of the Select Committee on the Medical Acts, in order that the inquiry into Medical Education and Registration may be continued.

Mr. Mundella replied, that the Committee was appointed last session, not to inquire into the Medical Acts, but to consider three Bills, which the House referred to it, one of which was a Government Bill. It was not the intention of the Government to reintroduce that Bill this session, and during the recess the whole question would probably be considered. There was no reason at this moment for the reappointment of the Committee.

CONTAGIOUS DISEASES ACTS.

The second reading of the Bill introduced by Sir Harcourt Johnstone, Mr. Stansfeld, and Mr. Whitbread, for the repeal of the Contagious Diseases Acts of 1866 and 1869 has been fixed for the 22nd instant.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination for the Fellowship of the College at a meeting of the Board of Examiners on May 27th:—

Francis H. V. Voss and David Phillip Harris, London Hospital; Stephen Chapman Townshend, St. Bartholomew's Hospital.

Of the 68 candidates examined during last week, 31 failed to satisfy the Board of Examiners, and were referred for six months' further anatomical and physiological study.

The total number of candidates admitted to the Primary Examination in Anatomy and Physiology for the Membership of the College during the sittings of the Board of Examiners in April and May last was 484, of which number 123 were referred for three and 12 for six months. In the corresponding period last year the total number of candidates examined was 480, and the rejections were 137.

The final examination for the diploma of Fellow of the College was brought to a close on the 29th ult. Of the 21 candidates admitted to examination, 11 were successful. We shall publish the list of names next week.

[In the list published last week of gentlemen who passed the Primary Examination the name "Chippendale" should have been printed "Chippingdale."]

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 27th:—

Abbott, James Eastee, Darlington.
Benham, Harry Arthur, Clifton, Bristol.
Beckett, Thomas George, Brick-lane, Spitalfields.
Benthall, Winfred, Sherbourne, Dorset.
Furness, John, Hesketneed-market, Cumberland.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Edmund Samuel Dashwood, Guy's Hospital; James Hedges, King's College; Charles Speight Kilham, Sheffield Infirmary.

[For "Rees Thomas Edward Davies, Millfield-park, Aberdaur," in last week's list, read Rees Thomas Edward Davies, Wellfield-park, Aberavon.]

FOURTEEN cases of sunstroke, twelve of them fatal, are reported to have occurred in New York since the commencement of the hot weather.

MR. GEORGE FLEMING, Army Veterinary Inspector, has been elected President of the Royal College of Veterinary Surgeons for the ensuing year.

TRINITY COLLEGE, DUBLIN, will receive a valuable legacy in the shape of many rare works in classics and oriental literature, under the will of the late Dr. Kenealy.

THE State Ball given by command of the Queen at Buckingham Palace on the 27th ult. was attended by the following members of the profession:—Drs. Minter, Risdon Bennett, John Lowe, G. V. Poore, and Robertson.

AT the fifty-second half-yearly election of candidates for the benefits of the Royal Hospital for Incurables, Putney, it was stated that there were no fewer than 160 applicants for admission, whereas the vacancies were only 25 in number. At the present time the institution contains 185 inmates, all afflicted with maladies which have been pronounced incurable.

THE Earl of Derby presided on the 27th ult. at the annual Court of Governors and subscribers of the Brompton Hospital for Consumption, and, in moving the adoption of the report, said that whilst in 1878 there were 11,500 out-patients, in the previous year they numbered nearly 12,000. The much-required new building, now in course of construction, would accommodate a large number of additional patients, and would entail an extra outlay of £10,000 annually from the funds of the hospital.

SOCIETY OF ARTS.—In connexion with the Conference on the Progress of Public Health, which, it is announced, will be held by the Society of Arts on the 10th and 11th inst., it is intended, as in former years, to hold an Exhibition of Sanitary Appliances. These exhibitions, though on a small scale—the Society's premises not affording room for a large collection—have been found very useful in former years, as the Conferences have always been largely attended by sanitarians from different parts of the country.

THE HARVEIAN ORATION will be delivered this year by Dr. J. W. Ogle, at the Royal College of Physicians, on the 25th inst., at 5 o'clock.

THE NORTH-EASTERN HOSPITAL FOR CHILDREN.—The Duke and Duchess of Connaught on Wednesday visited the North-Eastern Hospital for Children in the Hackney-road, and the Duchess declared the new wards open.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes at the St. Mary's Hospital Medical School was held on Wednesday, June 2nd, the Earl of Carnarvon presiding. The report of the school, read by the Dean, stated that the condition of the school was satisfactory. After presenting the prizes to the successful students the Earl of Carnarvon addressed a few words of congratulation and encouragement to them.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Earl of Bessborough bequeathed £200 to St. George's Hospital. The Goldsmiths' Company have given £100 to the general fund, and £100 to the new-wing building fund of the Royal Hospital for Incurables at Putney. Messrs. Baring Brothers and Co. have given £100 to the North Eastern Hospital for Children. The Misses Brooke have given £50 to each of the following institutions—viz., Meath Hospital, Sir Patrick Dun's Hospital, and the National Eye and Ear Infirmary, Dublin. The Adelaide Hospital, Dublin, has received £100 under the will of the late Mr. Charles Bishop. The Right Hon. W. H. Smith, M.P., has given £50 to the Charing-cross Hospital.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.—The fifty-seventh annual meeting of this Society was held in Birmingham on May 28th, Dr. Nason, of Stratford-on-Avon, president, in the chair. The report stated that the invested funds of the Society amounted to £9560, and that £395 had been dispensed in grants during 1879. A legacy of £100 had been received from the executors of Mr. Pye-Chavasse, a former trustee. Dr. Nason handed in donations amounting to £71. The following officers were elected:—President, Mr. W. H. Sproston, Birmingham; President-elect, Dr. Fitch, Chaddesley; Treasurers, Dr. Wade and Mr. Bartleet; Vice-Presidents, Mr. Batten, Bromsgrove, and Dr. R. C. R. Jordan; Trustees, Dr. Foster, Mr. W. C. Garman, Wednesbury, and Mr. J. F. West; Honorary Secretary, Dr. Sawyer. A vote of thanks was given to Mr. Bartleet, who for the last five years had assiduously devoted himself to the affairs of the Society in the office of honorary secretary. After the meeting the annual dinner took place at the Grand Hotel, the chair being occupied by Dr. Nason, and the vice-chair by Dr. Sawyer.

THE LEVÉE.—The following members of the medical profession were presented to H.R.H. the Prince of Wales, at the Levée held by the Queen at St. James's Palace, on Monday last:—Surgeon George Houlton Bishop, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon F. E. Barrow, by the Director-General, Army Medical Department; Surgeon F. R. Barker, by the Director-General, Army Medical Department; Surgeon R. F. Cumming, Army Medical Department, by Lord Londesborough; Surgeon W. J. Campbell, by the Director-General, Army Medical Department; Staff-Surgeon James R. Drew, R.N., by the Duke of Edinburgh; Surgeon R. D. Donaldson, by the Director-General, Army Medical Department; Surgeon-General Hunter, M.D., honorary surgeon to the Queen, by the Secretary of State; Surgeon J. G. Harwood, by the Director-General, Army Medical Department; Surgeon W. R. Henderson, by the Director-General, Army Medical Department; Surgeon A. M. Kavanagh, by the Director-General, Army Medical Department; Surgeon H. G. Michael, by the Director-General, Army Medical Department; Surgeon Alexander Oberlin MacKellar, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon Samuel Osborn, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon G. T. Thomas, Madras Medical Service, by the Secretary of State; Surgeon-General J. A. Woolfreyes, M.D., C.B., C.M.G., on return from service in South Africa, by the Director-General, Army Medical Department; Surgeon J. Watson, by the Director-General, Army Medical Department; Surgeon T. P. Walsh, by the Director-General, Army Medical Department. The general company included the following gentlemen:—Sir Henry Thompson, Mr. Erasmus Wilson, Mr. Thomas Wakley, Professor Longmore, Surgeon-General W. Munro, and Dr. W. Alexander, of Halifax.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ABBOTT, R. T., M.D., has been appointed Medical Officer to the Bray District of the Rathdown Union, vice T. L. Whistler, M.B., resigned.

BRUNTON, J., M.A., M.D., has been re-elected, for a further period of four years, Examiner in Midwifery and Medical Jurisprudence at Glasgow University.

BRYANT, T., F.R.C.S.E., has been appointed Examiner in Surgery to the University of Durham.

CANTON, T., L.K.Q.C.P.I., has been appointed Medical Officer to the Kilskeo Dispensary District of the Kells Union, vice T. F. Sparrow, M.D.

CARTER, W. F., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for the Second District of the Bedminster Union, vice Smart, resigned.

EDGELOW, S. H., M.R.C.S.E., has been appointed Medical Officer for the Sherburn District of the Scarborough Union.

ELLIS, E. T. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Third A District of the Hailsham Union.

FRASER, G. B., M.R.C.S.E., L.S.A.L., has been appointed Honorary Visiting Medical Officer to the West of England Sanatorium, vice J. J. E. Willmott, M.D., resigned.

GREAVES, Mr. E. H., has been appointed Dispenser to the Sussex County Hospital, vice Fawthrop, resigned.

JOHNSTONE, C. R., B.A., M.R.C.S.E., L.S.A.L., has been elected Resident Medical Officer to the Dudley Dispensary.

NEWMARCH, B. J., M.R.C.S.E., has been appointed Surgical Registrar to King's College Hospital, vice W. W. Cheyne.

PARSONS, W. A., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Tanworth District of the Solihull Union.

PETTINGER, J. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Resident Assistant Medical Officer at the Crumpsall Workhouse of the Manchester Township, vice G. H. Jackson, deceased.

PULLIN, F. B., L.R.C.P., has been appointed Medical Officer to the Churchstanton District of the Taunton Union, vice S. W. Mackey, resigned.

SHEA, J., M.D., has been appointed Analyst for the Borough of Newbury.

SMART, A., M.D., L.R.C.P.Ed., has been appointed Third Assistant-Physician to the Royal Infirmary, Edinburgh.

STEPHENS, R. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the First District and the Workhouse of the St. Austell Union.

TAYLOR, M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Workhouse of the Cannock Union, vice Blackford, resigned.

WILLIAMS, A. F., L.F.P.S.G., L.M., has been appointed Medical Officer of Health for the Brixworth Rural Sanitary District. £5 5s. per annum, and £1 1s. for every visit made by order of the Board.

WILSON, D., M.B., C.M., has been appointed Medical Officer for the Workhouse of the Huddersfield Union, vice Macgregor, resigned.

YOUNG, A. B., M.B., C.M., has been appointed Pathological Registrar to the Royal Infirmary, Manchester, vice J. D. Bradshaw, M.B., resigned.

Births, Marriages, and Deaths.

BIRTHS.

HAMILTON.—On the 30th ult., at Northampton-park, N., the wife of Thomas Hamilton, M.B., F.R.C.S.E., of a son.

LAURIE.—On the 9th ult., at Simla, the wife of Edward Laurie, Esq., Surgeon, Bengal Army, Professor of Surgery, Lahore Medical School, of a daughter.

NORMAN.—On the 22nd ult., at Edde-Cross House, Ross, the wife of J. W. Norman, M.B., F.R.C.S., of a daughter.

THOMSON.—On the 24th ult., at Westgate, Peterborough, the wife of William Thomson, M.D., F.R.C.S.Ed., of a son.

MARRIAGES.

FRASER—AUSTIN.—On the 1st inst., at St. Benedict's Church, Glastonbury, Somerset, by the Rev. J. A. Miller, Vicar, Graeme Bisdee Fraser, M.R.C.S.E., L.S.A.L., of Weston-super-Mare, younger son of P. Gordon Fraser, Esq., late Colonial Treasurer and Member of the Executive and Legislative Councils of Tasmania, to Fanny, youngest daughter of Jas. Austin, Esq., of The Abbey, Glastonbury.

WELLS—BURT.—On the 26th ult., at the Catholic Apostolic Church, Mansfield-place, Edinburgh, Charles Augustus Este Wells, eldest surviving son of the late Rev. John Tighe Wells, of Albury, Guildford, Surrey, to Anne Susannah Macdonald, youngest daughter of the late John Graham Macdonald Burt, M.D., F.R.C.P.E., of Edinburgh.

DEATHS.

BRADLEY.—On the 27th ult., at the Granville Hotel, Ramsgate, after three days' illness, S. M. Bradley, Esq., F.R.C.S., of Oxford-road, Manchester (one of the Surgeons to the Manchester Royal Infirmary). Friends, please accept this intimation.

GRAYLING.—On the 29th ult., at Sheldwich House, Forest-hill, George Grayling, M.D., aged 62.

HILLS.—On the 24th ult., at Bridge-road West, Battersea, London, S.W., George Hills, M.D., F.R.C.S.E., &c., late of Arundel, Sussex, eldest son of the late George and Charlotte Hills, of Arundel and Slindon, Sussex, aged 73.

TAYLOR.—On the 27th ult., at St. James's-terrace, Regent's-park, Alfred S. Taylor, M.D., F.R.S., in his 74th year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BOGUE, DAVID, London.
Epidemiology. By John Parkin, M.D. Part II. Second Edition. pp. 447. With Maps.

CHURCHILL, J. & A., London.
Diagnosis of Diseases of the Spinal Cord. By Dr. W. R. Gowers. With Illustrations. pp. 80.
Pay Hospitals and Paying Wards throughout the World. By H. C. Burdett. pp. 176.
The Spirit of Nature. By H. B. Balldon. pp. 216.
Orthopragms of the Spine. By R. H. Bigg, Assoc. C.E. pp. 149.

DAVIS, G. S., Detroit.
Homœopathy: What is it? By Dr. A. B. Palmer. pp. 104.

GRIFFIN & Co., London.
The Surgeon's Pocket-book. By Surgeon-Major J. H. Porter. Second Edition. pp. 319. With Illustrations.

HERBERT & Co., London.
Parliamentary Handbook. pp. 128. 2s. 6d.

HODGSON & SON, London.
The Calendar of the College of Preceptors for 1880. pp. 174.

KEGAN PAUL & Co., London.
The Brain as an Organ of Mind. By Dr. H. C. Bastian, F.R.S. Illustrated. pp. 708.

LEWIS, H. K., London.
A Treatise on Oral Deformities. By N. W. Kingsley, M.D.S., D.D.S. pp. 541. With 350 Woodcuts.

LINDSAY & BLAKISTON, Philadelphia.
Guide to the Practical Examination of the Urine. By Dr. J. Tyson. Third Edition, with Illustrations. pp. 184.

LONGMANS, GREEN, & Co., London.
A Winter Tour through India, Burmah, and the Straits. By H. E. Falk. pp. 90.
A History of Classical Greek Literature. By the Rev. J. P. Mahaffy, M.A. Two volumes. pp. 458 & 525.

PLON ET CIE., Paris.
L'Année Médicale (Deuxième Année), 1879. pp. 266.

SAMPSON LOW, MARSTON & Co., London.
Science a Stronghold of Belief. By Dr. R. B. Painter. pp. 471.

SMITH, ELDER, & Co., London.
Antiseptic Surgery. By William MacCormac, M.A., F.R.C.S.E. & I. pp. 286. With Illustrations.

SWAN SONNENSCHEIN & ALLEN, London.
Elements of Modern Chemistry. By Adolphe Wurtz. Translated and Edited, with the sanction of the Author, by Dr. W. H. Greene. pp. 687. With Illustrations.

Della Emoglobinuria da Freddo Lezoni di Augusto Murri. (Bologna, Garagnani.)—Discusion sobre el Tratamiento de las Fiebres Intermitentes.—Medical Education. By Dr. Pye-Smith.—British Journal of Dental Science for May. (Churchill.)—Monthly Review of Dental Surgery. (Smith, Elder, & Co.)—Modern Abuse of Gynæcology. By Dr. C. E. Wing. (Boston.)—Victorian Review for April.—Caries of the Ankle in Children. By Dr. V. P. Gibney.—Thomas Keith and Ovariotomy. By Dr. Marion Sims. (New York: Wood.)—River Water. By Dr. C. M. Tidy.—Dorset County Lunatic Asylum Report for 1879.—The General Medical Council: Whom it represents, and How it should be Reconstructed. By Dr. A. H. Jacob. (Baillière, Tindall, and Cox.)—Florida, what it Offers to the Capitalist and Settler. (Bailey, Wilson, & Co.)—Fifth Annual Report of the Darenth Schools. (M'Corquodale.)—Transactions of the Odontological Society of Great Britain. (Wyman & Sons.)—Fifteenth Annual Report of the Sanitary Commissioner for Madras, 1878.—The Doom of the Great City. (Newman.)—On the Coincidence of Optic Neuritis and Subacute Transverse Myelitis. By C. E. Seguin.—The Laws of Health.—Tenth Annual Report of the Deputy Master of the Mint, 1879.—Report of Executive Committee of the Duchess of Marlborough's Fund. (Atkinson, Dublin.)—Sessional Proceedings of the National Association for the Promotion of Social Science.—Pauperism and Drink; some Remarks on Workhouse Hospitals. By T. M. Dolan.—Pyrexin or Pyrogen as a Therapeutic Agent. By Dr. J. Drysdale. (Baillière, Tindall, & Cox.)—Sea-sickness. By Dr. G. M. Beard. (Treat, New York.)—L'Etude des Maladies et de l'Acclimatement des Européens dans l'Afrique Intertropicale. Par le Dr. Dutrieux.—Case of Ovarian Pregnancy. By Dr. T. Jones.—Paralysie Vaso-Motrice des Extrémités ou Erythromélalgie. Par le Dr. M. Lannois. (Baillière et Fils.)—The Family Physician. (Cassell & Co.)—Lehrbuch der Harn-Analyse.—Bearbeitet von W. Zuelzer. (Verlag von G. Hempel.)—Annals of the Brooklyn Anatomical and Surgical Society.—Fraser's Magazine, June.—Time, June.—Good Words, June.—Sunday Magazine. (Isbister & Co.)—Management of Infantile Eczema. By Dr. Bulkley.—Die Belastungsdeformetäten der Gelenke. Von Dr. F. Busch.—Annuaire des Specialités Médicales et Pharmaceutiques, 1880.—The Contemporary Review, June.—Report of the Medical Superintendent of the Fulham Hospital.—Veterinary Journal, June.—St. Louis Courier of Medicine, May.—On the Rate of Cooling of the Human Body after Death. By Dr. Wilkie Burman. (Oliver & Boyd.)—Homœopathic Review. June.—British Journal of Dental Science.—Ovarian Tumours. By Dr. E. Borck.—Contributions to the Study of Nerve Action in Connexion with the Sense of Taste. By Dr. Sigerson.—Bulletin de l'Académie de Médecine.

Notes, Short Comments, and Answers to Correspondents.

THE HASTINGS GUARDIANS AND THE PROVIDENT DISPENSARY.

WE do not think there will be any serious objection made by the medical officers of the Hastings Provident Dispensary to supplying members needing relief with certificates, if the guardians will receive those certificates with the respect to which they are entitled. Medical men will not voluntarily put themselves into the position in which Poor-law medical officers too often find themselves—that of recommending relief in urgent cases, and having their recommendations disallowed.

Voyageur, M.D.—Our medical contemporary and namesake in Canada states there is a good opening for a medical man in the village of Udora, co. Ontario.

Surgeon-Major.—We believe eighteen shillings an ounce.

"RESECTION OF RIBS IN EMPYEMA."

To the Editor of THE LANCET.

SIR,—In your remarks on the treatment of empyema by resection of the ribs, you properly point out that in the process of recovery one of the chief objects to be obtained is expansion of the lung.

Three years ago, at a meeting of the Medical Society (Feb. 26th, 1877), a discussion took place on this subject in consequence of my introducing to the notice of the Society an apparatus for securing the thoracic cavity against the entrance of air through the drainage-tube. Again, at the meeting of the British Medical Association at Manchester in August, 1877, after six months' consideration of the physiological and pathological conditions which should determine the treatment of empyema, I brought the subject forward by sending some observations on the importance of preserving a vacuum in the pleural cavity after paracentesis of the thorax and the insertion of the drainage-tube, with description of a method by which continuous aspiration may be effected.

The remarks contained in your article of the 22nd of May support the views I ventured to express as physically and pathologically important in determining the treatment of empyema. On the occasion of the discussion at the Medical Society, some objection was taken to the principles I desired to establish, particularly by my friend the late Mr. Maunder. It was not apparent to him at the time that if we wish to obtain expansion of the lung-tissue, we have no force which we can exert except that of atmospheric pressure, and there can be no doubt in the mind of anyone who considers the subject, as was afterwards the case with Mr. Maunder that in the movements of inspiration, if there is an opening in the chest-wall, the lung on that side will remain in a passive state, and cannot expand. You will perceive that in the use of the term "continuous aspiration" I suggested the propriety of preserving an exit for secretions from the thoracic cavity, at the same time that the force of atmospheric pressure was brought to bear on the lung.

The apparatus described at the meeting at Manchester was not as perfect as I should have wished, and as my views attracted very little, if any, notice from the profession, I have made no effort to provide more perfect means for obtaining the object in view. The difficulty which presents itself is in the attachment to the surface of the chest of an aspirator which will produce a gentle and constant exhaustive force on the lung; and, until this difficulty is overcome, I might suggest for the consideration of those who are interested in these cases the question whether the expansion of the lung might not be obtained by the application of an exhausting syringe, with a simple india-rubber cup or sucker, for a few minutes at intervals of a few hours in the course of the day. I was enabled to satisfy myself of the general truth of the principle of exhaustion by the application of an india-rubber cup around the opening of a thoracic cavity in a child of four years of age, who was under treatment at the hospital in Great Ormond-street. The drainage-tube had been introduced a few weeks before the cup was applied, and it was interesting to observe that the child would replace the cup of its own accord when adhesion had been reduced by the gradual entrance of air. The cup would remain attached for about three hours, and it was evident from the way in which the child replaced it that the entrance of air into the thoracic cavity occasioned discomfort, if not distress.

It will be clear to your readers that it would be of great advantage if we could obtain some efficient means of securing the condition of vacuum which is so important in the treatment of empyema after tapping, and I feel sure that any apparatus efficiently serving this purpose would receive every attention.

Yours obediently,

Savile-row, May 26th, 1880. R. J. LEE.

"TREATMENT OF GOUT."

To the Editor of THE LANCET.

SIR,—In reply to "Senex's" question as to blisters in gout, I beg to say that many years ago, whilst assistant with Dr. Richardson, of West Auckland, I observed him always rub over the affected part with nitrate of silver, which gave instant relief, and since I have invariably adopted his plan with the same result. Of course the general treatment was as usual, with an especial predilection for lithia carbonate and colchicum.

Yours &c.,

Birmingham, May 24th, 1880. J. H. LARKIN.

MOURNERS' CLOAKS.

IT is satisfactory to see the hideous and unwholesome practice of wearing mourners' cloaks at funerals is being generally discouraged. The observance of the absurd custom has for years been growing less strict, and we may hope that shortly it will be discontinued altogether. As an indication in this direction, it may be noted that the Council of the United Synagogue of British Jews have passed a resolution to abandon the use of these sombre accessories at funerals.

A Subscriber.—The elections at the Royal Medical Benevolent College took place on the 27th ult., when Mr. Frederick Dover, F.R.C.S., headed the list of successful pensioners with 4750 votes, Mrs. F. Bourne 2264, and Mr. S. Rodick 1857. There were twelve unsuccessful candidates. For Foundation Scholarships there were forty candidates. The following (eight in number) were successful:—Merryweather, 8245; Charlton, 7721; Cheetham, 7134; Cranswick, 7145; Hatland, 6372; Pinder, 6323; Hutchings, 6277; and Edwards, 5986.

Medicus, M., and *M.D.* have forgotten to enclose their cards.

"EXTRACTING TEETH AND PUTTING THEM BACK INTO THE JAW."

To the Editor of THE LANCET.

SIR,—A tooth of a single root, or the gum portion of such a tooth, may be extracted, cleansed, filled, or an artificial crown adjusted and returned to its former socket, in many cases; success depends upon the constitution, temperament, and condition of health in the patient at the time of operation. The tooth must be more or less shortened, smooth grooves formed to help to secure retention, which is entirely mechanical, dependent wholly upon lateral or horizontal pressure; this retaining pressure not secured in the operation, or lost by any subsequent cause, the tooth invariably elongates until it is extruded from the mouth. This tendency is so unerring and invariable, that all teeth, in all conditions of health, in all temperaments, will be extruded, without this mechanical retaining power be secured by natural or artificial contact, through shape, position, occlusion in mastication or in rest.

All the parts engaged in supporting and retaining the teeth are essentially provisional, and always changing to meet the demands made by the wear and tear of the mouth from the forces exercised in grinding and eating. A transplanted tooth is a lifeless substance, wholly divested of all means of vital or reciprocal union, essentially a foreign body, alien to all growth of this part tolerating its presence, and always working to throw it out, and prevented only from doing so at once by mechanical impediments. Indeed it is difficult to understand a necessity for this operation, as it is to doubt the recuperative energy in many constitutions and temperaments to heal so simple a wound by first intention as would be made in this operation under skilful selection of time and a patient's idiosyncrasy.

A simple porcelain tooth with fang would be, perhaps, less objectionable than the one extracted. It would be no more a foreign substance in effect, less subject to changes, might be easily and accurately placed, and would be followed by the healing of the part by first intention, just as well and as soon as the, or a, natural tooth, if it were well provided for in its retention by mechanical support; but without this support, and positive constant mechanical retention, it would in a short time be ejected from its position. This is the invariable rule with all teeth, under the most perfect condition of health in themselves, when from disease or unskilful interference this mechanical retaining force has been lost. The keystone of the dental arch destroyed, it is a question of time only when the teeth become loosened and finally lost to the mouth. It is not a question of vital reunion or of periosteal existence, but one of ordinary freedom from inflammatory tendency or mucous irritability at the time of operating, with the positive application of mechanical force to firmly retain the tooth in its place. There never has been a doubt in the older members of the dental profession of the possibilities of successfully doing the operation, which is old enough to be better in itself. This has been conceded by Harris, Westcot, Maynard, Forster, Devinelle, and others; but its utility, desirability, or necessity has never been recognised, nor ever can be by an intelligent comparison with other means to the same end. As good, if not a better, result can always be attained by a simpler, safer, and more expeditious operation. Consequently, this exceptional practice, although always held as possible, is not, and never will be, the practice, or an accredited operation.

I remain, Sir, your obedient servant,
Brook-st., Grosvenor-sq., June, 1880. ALFRED BLANDY, M.D.

To the Editor of THE LANCET.

SIR,—In reference to the above in your last week's issue, the following may be of interest. It occurred during the time I was house-surgeon at the Rotherham Hospital, and I should have reported it at the time but that I thought it was no novelty.

Some time in 1877 a boy was brought to the Hospital suffering from injuries sustained by falling down some stone steps, whilst carrying an ingot of iron at Messrs. Corbitt's stove works. Of two prominent upper middle incisors, one was driven up through the socket into the nose and the other was knocked out altogether. I pulled down the one from the nose with a pair of forceps into its proper place, and on asking some question about the other, the boy pulled it out of his trousers pocket. I washed it (probably in carbolic lotion), and replaced it in the socket. A piece of cork was then placed between these teeth and the lower ones, and the jaw fixed in the ordinary way with a four-tailed bandage. I forget how long the bandage was kept on, but in a short time both teeth became quite firmly fixed, and have remained so till I last saw him, some months ago. From what I could make out, the tooth was "again part of the organism," and not a foreign substance.

I am unable to say how long the tooth was out of its socket, but it must have been more than half an hour.

I remain, yours, &c.,
W. MAERIG JONES, M.R.C.S.
Wath-upon-Dearne, Rotherham.

To the Editor of THE LANCET.

SIR,—In reply to your inquiry on this subject, allow me to mention a matter of personal experience.

When seventeen years of age my second left upper molar began to decay. Having then lately become a medical student, and having read about abstraction and reimplantation of teeth, I drew this tooth myself, scraped out the small cavity, washed the tooth in hot water, and replaced it. Severe inflammation followed, with much swelling of the cheek; these subsided after three days, and the tooth became fairly firm and useful, and never ached again; but an accident in my twenty-second year loosened it, and I again drew it. The decay had not progressed. I also afterwards extracted a tooth for a patient and replaced it immediately without washing, and it became very firm and useful, with very little inflammation. I am of opinion the washing of my own was a mistake.

Yours truly,
Liverpool, May 29th, 1880. JOHN W. HAYWARD, M.D.

SEA-SICKNESS.

Messrs. Wm. Nicolson and Co., of Jeffreys-square, E.C., write to correct an inaccuracy which they state we committed last week in attributing the invention of "self-leveling berths" to a steam-ship company. The device appears to have been introduced to public notice by the Huston Ship's Berth Company, of Boston, U.S.

Mr. R. Ellery.—We are unable to call to mind the circumstance mentioned.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—In reference to your article on this subject in your last week's issue, I think it only fair to some of the leading West-end firms to mention that the denial made by them to the statements contained in my original letter to *The Times* of NOV. 7th, 1878, was proved on further investigation to be substantially correct. Only a few female shop assistants are employed in the better houses, and they are for the most part provided with seats. There are, however, a considerable number of young women compelled to stand from morning till night, during business hours, in numerous houses, where the welfare and comfort of the assistants are not so carefully studied.

The Factory and Workshop Act of 1878 does not apply to shop assistants, and nothing practical will ever be universally carried into effect until some supplemental clause be added, restricting the hours of labour, defining the time for meals, and insisting on seats being provided. Competition is now so great that the young women are afraid to advocate their own claims for fear of being driven from their employment, and therefore nothing can be expected to emanate from them. It is sincerely to be hoped that your "determination to press the demand for this reform until the claims of common humanity are recognised" will meet with the success it deserves.

I remain, Sir, yours faithfully,
Wimpole-street, June 1st, 1880. ARTHUR W. EDIS, M.D., &c.

J. W.—Next Monday will be the last day for sending in nominations for seats in the Council of the College of Surgeons. Up to the hour of going to press the following gentlemen had been duly nominated:—Mr. T. Smith, Mr. J. W. Hulke, Mr. T. Bryant, and Mr. B. Hill.

Dr. F. H. Daly.—Yes; but the report must be shorter, if possible, to insure prompt insertion.

Mr. E. F. H. Burroughs.—4, St. Martin's-place, W.C.

"THE TITLE OF 'DOCTOR.'"

To the Editor of THE LANCET.

SIR,—The gentleman who wrote upon the above subject in your last issue cannot have been attached to the Edinburgh College of Physicians for many years, otherwise he would have known that the Edinburgh authorities had been in the habit of addressing their licentiates as Dr.

Two or three years ago this matter was discussed in the pages of THE LANCET, and Dr. Plomley, of Maidstone, conclusively proved the truth of this statement by forwarding a letter received by him from Dr. Haldane in 1867 or 1868 in reference to this question.

Yours faithfully,
June 1st, 1880. M.R.C.P.E.

ANHYDROUS AIR AS A REMEDY FOR CANCER.

To the Editor of THE LANCET.

SIR,—Permit me to correct an error in the notice of the above, copied from the *New York Medical Record*, in your columns last week. The air is passed through chloride of calcium, not chloride of lime.

Yours obediently,
May 31st, 1880. G. A. KEIWORTH.

FILTERING MATERIALS.

THE relative value of the materials used in filters has been the subject of inquiry by Professor De Chaumont, of the Army Medical School, Netley, on behalf of the Admiralty and War Office. Animal charcoal, carferal, silicated carbon, and spongy iron were tested in fifteen series of experiments. Of the whole series, carferal (a mixture of carbon, iron, and alumina) proved its superiority in thirteen, and silicated carbon in two.

Mr. Ossian Vincent.—We regret that great pressure on our space will prevent the publication of the lecture.

POISONOUS DYES.

To the Editor of THE LANCET.

SIR,—On Feb. 14th last my patient, Miss M——, aged twenty-eight years, had a pair of beautiful cardinal red silk stockings. I have failed to find out where they were purchased or manufactured. On the 9th of March my patient for the first time wore the stockings, and she continued wearing them for three days. During this period she suffered from a good deal of itching and burning of the feet. On the evening of the third day she complained of intense pain and heat in both feet, and of a feeling as if they would burst. I saw her the following morning, and found her suffering from erysipelatous inflammation of both feet and toes. The pain was acute, and the swelling of the toes remarkable. There was considerable constitutional disturbance. The treatment I used was tincture of the perchloride of iron internally in half-drachm doses, and lead and spirit lotion locally. After a couple of days the right great toe looked somewhat dark, so I discontinued the lotion to this toe, and applied a warm linseed poultice. The top of the toe subsequently became gangrenous, and sloughed off. The patient was for a long time very ill, and is indeed only now sufficiently recovered to go to the seaside for change of air.

I had the advantage of meeting, in consultation, Mr. Henry Smith, of King's College, several times during the progress of this tedious and troublesome case, and I am indebted to him for some valuable hints. We found a grain of opium taken every night at bedtime very useful in controlling pain in the sloughing toe and procuring sleep. I believe, also, the healing process, after the slough had separated, was promoted by the opiate.

I have briefly recorded this case as a warning to intending purchasers of *cardinal red* or other poisonously dyed socks or stockings.

Yours obediently,
FREDERICK H. DALY, M.D.

Queen's-road, Dalston, May 28th, 1880.

A. B. C. and *Mr. William Sykes.*—We do not approve advertising in any form; but it would be impossible to notice the many instances of this evil which are brought under our notice.

Dr. Bernard Kelly will find the article published in THE LANCET of April 3rd.

GENERAL LYING-IN HOSPITAL.

To the Editor of THE LANCET.

SIR,—Is it usual in our profession and consonant with medical ethics for a physician to undertake, and receive a fee for the performance of, the duties of a hospital in the interval between the acceptance of the resignations of the whole acting medical staff and the appointments of their successors, especially when one of the staff has offered to continue his attendance until the new appointments are made? If it is the duty of a Committee to provide medical attendance during the interval, is it not also the duty of the physician who is applied to, to ask the retiring officers why they have thought it necessary to resign, and is not such a line of conduct the more imperative when the inducement, which I still think unusual, of payment for such services is offered? The ideas on the ethics of the medical profession which are expounded in Mr. Owen's letter of last week are to me so novel, and are so important in our relations to lay committees, that I have ventured to ask you for some enlightenment on these points. I am, Sir, your obedient servant,

June, 1880. F.R.C.P.

*** We wait the decision of the Committee of Inquiry on the question of fact. Our interest in the question is exclusively professional, and we do not desire to meddle in the matter in any other sense.—ED. L.

J. I. I.—We are sorry not to be able to accept the estimate formed by our correspondent of the grievances of medical officers in the militia.

Dr. J. W. Hunt, (Wolverhampton.)—The paper has been received, and is marked for early insertion.

Molar.—Registration is indispensable.

CÆSAREAN SECTION.

To the Editor of THE LANCET.

SIR,—I shall be particularly obliged if you will kindly allow me, through the medium of your very valuable journal, to ask the favour of any of your readers to oblige me by sending any case of Cæsarean section which has been performed in Great Britain and Ireland, but which has not been published. I am engaged in preparing a second edition of my observations, which I intend shall form a complete historical record of all cases of this capital operation which have been performed up to the present time in the before-named countries.—Yours truly,

Manchester, May 31st, 1880. THOMAS RADFORD.

Mr. William H. Lee.—The best galvaniser is usually some friend or servant of the patient, who may easily be taught in a few lessons how to apply the current. We do not know a "galvaniser" whom we could recommend, even were it not against our invariable custom to make any such recommendation.

G. B. S.—Corbyn and Co., High Holborn.

ETHER SPRAY IN WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—Some two years ago I had in the same house two young patients very ill with whooping-cough; and when the younger one, an infant of only ten weeks old, seemed at the last gasp, and when all medicines had been abandoned from inability to swallow, I went into a neighbouring chemist's shop, and purchased a sixpenny scent spray-producer and a small quantity of compound spirits of sulphuric ether, with which I returned to my patient, and I have no hesitation in saying that the free use of these articles saved its life. The vapour of the ether was blown freely into the child's face and over its clothes. I also ordered the nurse to blow it about the room at frequent intervals. Since then I have used this remedy in scores of cases, and have never yet met with one in which there was not a marked relief to the spasmodic cough, and this is my reason for venturing to send so simple a remedy to THE LANCET, hoping that others may relieve many a little sufferer, as I have done, in this trying and painful disease.

I may say, in conclusion, that I do not suggest the ether spray as a *cure*, but only as an important aid in the *cure* of whooping-cough.

Yours truly,
Longton, May 17th, 1880. JAMES WEAVER, M.D.

Mr. W. G. Parkyn.—The precise terms of the original agreement ought to have been carried out.

WE regret to be compelled again to hold over *Dr. Stephen Mackenzie's* letter.

VACCINATION.

G. H. D., writing on this subject, says:—

"It is my experience that, so far from private vaccinators following official instructions as to the number of vesicles necessary, many patients have recourse to them in order to avoid having their children's arms marked in four or even three places; and I have long been of opinion that vaccination cannot be considered to have a fair chance while people can evade the proper performance of the operation by having recourse to private practitioners who are not subjected to official supervision. I think this to be a subject of great importance."

A Small Public Vaccinator remarks:—

"The question of the number of vesicles produced at each vaccination is in practice unsettled and unsatisfactory. One practitioner does it in one place only, another in two, a third in three, a fourth in four, and, finally, some in five or more. Instructions have been issued by the Local Government Board on this subject, acknowledged by all, followed by a small majority, ignored by a not small minority, who for one reason or another, let us be charitable, choose to follow their own views rather than the instructions issued by the authorities. Under these circumstances, why should not the Local Government Board have public vaccinators of their own who are not in practice? The medical officers of health who are not in practice might be public vaccinators in their own districts, with fixed stations and certain days for vaccination."

A QUERY.

To the Editor of THE LANCET.

SIR,—Can any of your readers suggest—1st, a remedy (other than morphia) for acute neuralgia? or, 2nd, anything which will counteract the distressing effects on the brain caused by the subcutaneous injection of morphia?

Yours, &c.,
Berkhampstead, June, 1880. F.R.C.S.

THE ADMINISTRATION OF OPIUM.

To the Editor of THE LANCET.

SIR,—In reply to "Querist" in your impression of May 29th, I beg to suggest from half to one grain of extract of belladonna with each opium pill at night. I have a patient suffering from a severe form of paralysis agitans, who has taken nightly for more than two years five grains of opium and two and a half grains of extract of belladonna with little or no inconvenience, being able to get about a little during the day, attending to his farm.

Yours truly,
May 31st, 1880. E. W. J.

SALICYLIC ACID.

To the Editor of THE LANCET.

SIR,—Would any of your readers kindly tell me whether salicylic acid or any of its salts has been used in gout, and, if so, with what success?

Yours faithfully,
Chesterfield, June, 1880. RICHARD JEFFREYS.

TREATMENT OF GONORRHŒA BY THE URETHRAL DOUCHE.

To the Editor of THE LANCET.

SIR,—There is a paper by Mr. T. Windsor in the Manchester Medical and Surgical Reports for 1871, "On the Treatment of Gonorrhœa by the Urethral Douche," in which is described an apparatus very similar in design to the one referred to by me in THE LANCET of May 15th. Had I been aware of the paper I should have gladly acknowledged it.

Yours truly,
Liverpool, May 24th, 1880. REGINALD HARRISON.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bryant, London; Dr. Thin; Mr. F. R. Greenwood; Mr. O. Seth; Mr. Sykes; Mr. Taylor, Scarborough; Dr. Phipson; Dr. MacNalty; Dr. Keyworth; Mr. Brettell, Dudley; Mr. George, Chorley; Dr. Radford; Dr. Neale; Dr. Philpots, Poole; Messrs. Cassell and Co.; Mr. Buckston Browne, London; M. Rosenkranz, Berlin; Mr. Ormsby; Mr. Ogleaby, Leeds; Mr. Newton; Dr. Ewart, Brighton; Dr. R. J. Lee, London; Dr. Daly, Dalston; Mr. Lucas; Mr. Craigie; Mr. Hensman; Mrs. S. Butson; Mr. Morgan, Wallingford; Mr. Ellery; Messrs. Byles and Son, Bradford; Mr. Barnardo; Messrs. Burgoyne and Co.; Mr. Jordan, London; Mr. Inskipp, Hastings; Mr. Lawrence, London; Dr. Creighton, Cambridge; Dr. Dunlop, London; Lieut.-General Bourchier; Mr. Havers; Dr. Hayward; Mr. T. W. C. Jones, London; Mr. Shairp, London; Mr. Moore, Moreton-in-Marsh; Mr. Sewill; Mr. R. Lanth; Dr. Reid; Mr. Shirley Deakin, Allahabad; Dr. Russell, Glasgow; Dr. Christie, Glasgow; Dr. Thompson, Leamington; Dr. E. G. Barnes, London; Mr. Larkin, London; Dr. Pettigrew, Edinburgh; Mr. Mason, Paris; Mr. Lyle; Dr. Smart, Edinburgh; Mr. Crooke; Mr. Wickham Barnes; Dr. A. Marsden, London; Mr. S. F. Murphy, London; Mr. Maitland; Mr. Eastes; Mr. Friend; Mr. Warner; Dr. Sandford; Mr. Kitchener, Newcastle; Mr. Parker, Liverpool; Messrs. Marsh and Son; Messrs. Sharratt and Cree; Dr. Campbell; Dr. Heywood Smith, London; Dr. Blandy, London; Mr. Schreiner, Eastbourne; Dr. Edis, London; Mr. Elliott, St. Leonards; Dr. Blane, Bombay; Mr. Greenway, Plymouth; Mr. Saunder; Mr. Morton, New Brompton; Mr. R. Jeffreys; Dr. Pilcher, Brooklyn; Dr. Sawyer, Birmingham; Mr. C. White; London; Mr. M'Munn, Belfast; Dr. Alexander; Mr. Mehta, Baroda; Mr. M. Jones, Rotherham; Messrs. Wright and Co., Birmingham; Mr. Gurner, London; Mr. Kavanagh, Coventry; Mr. Bigg, London; Mr. Kellett, China; M.D.; Medicus M.; X. B.; Surgeon-Major; G. B. S.; A. B., Manchester; W. A. G., Pinner; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hanly, Sheffield; Mr. Buckland, Clapham; Mr. Grattan, Cork; Mr. Inman, Kettlewell; Messrs. Jolly and Sons, Norwich; Mr. Fraser, Glastonbury; Dr. Franklyn; Mr. Hamilton, Swadlincote; Mr. Waddy, Manchester; Mr. Bishop, Banbury; Dr. Shirtliff, Kingston-on-Thames; Mr. Brook, Huddersfield; Mr. Dove, Sherborne; Mr. Baron, Ulceby; Dr. Kavanagh, Deptford; Mr. Wall, Wigan; Messrs. Leader and Sons, Sheffield; Mr. Newman, Bowness; Messrs. Smith and Son, Dublin; Mr. Humby, Alresford; Mr. Lownds, Newcastle-on-Tyne; Mr. Morris, Colwyn; Mr. Arrowsmith, Bristol; Messrs. Gerrard and Tanner, London; Mr. Cornish, Manchester; Messrs. Armfield and Sons; Mr. Mulliner; Dr. Tinley, Whitby; Mr. Reece, Axbridge; Mr. Jones, Harlech; Mr. Wicks, Newcastle-on-Tyne; Surgeon, Oldbury; M.D., Notting-hill; F. R. T.; S. A. C.; Surgeon, London; H. F., Chobham; E. B., Wolverhampton; B., Kentish-town; G. C. H., Clapham; C. B., Stamford-hill; Fides, New Seahan; Ivan; R. E., Swansea; Medicus, Chesham; F. J. G.; A. B., Macclesfield; C. D. C., Leighton Buzzard; P. F.; Physician, Leeds; Medicus, Starcross; W. C. W., Hereford; J. R. G.; Medicus, St. Helens; R. J. D., Wells; Medicus, Bradford; Medicus, Aberdeen; &c.

Coffee Public-house News, Pharmaceutical Journal, Uxbridge Gazette, Western Lancet, Hulme Gazette, Church of England Temperance Chronicle, Kingsbridge Gazette, Public Opinion, Shield, Night and Day, El Jurado Médico-Farmacéutico, Worthing Intelligencer, Leamington Advertiser, Weekly Mercury, Midland Free Press, Export Mercantile Advertiser, Courier, Bolton Advertiser, Estates Roll, Spiritual Notes, Juristen-Zeitung, Boston Medical and Surgical Journal, Education, New York Medical Record, Medical Herald, Colonies, City Press, Commercial World, Western Daily Mercury, &c., have been received.

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N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—

J. ASTIER, 67, Rue Caumartin, Paris.

* To Subscribers, no charge is made for the insertion of these Notices.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 3rd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 28	30·19	W.	56	51	104	67	47	..	Cloudy
,, 29	30·48	N.W.	55	48	107	68	42	..	Cloudy
,, 30	30·38	S.W.	56	51	99	67	47	..	Cloudy
,, 31	30·17	N.	55	52	..	57	50	..	Overcast
June 1	30·14	N.E.	57	52	98	64	47	0·20	Cloudy
,, 2	30·04	E.	56	54	95	63	50	0·02	Overcast
,, 3	29·90	N.E.	55	53	..	63	50	..	Overcast

Medical Diary for the ensuing Week.

Monday, June 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

Tuesday, June 8.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. F. G. Hilton Price: "Camps on the Malvern Hills."—Rev. R. H. Codrington: "Religious Beliefs and Practices in Melanesia."—Mr. Peter Bemridge: "The Aborigines of Victoria."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. D. Powell and Mr. R. W. Lyell, "On Basic Cavity of the Lung treated by Paracentesis."—Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the old Operation was successful."

Wednesday, June 9.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.—5 P.M. Mr. Osman Vincent, "On Genu Valgum and Rachitic Deformities."
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Professor H. Smith. "On the Life History of the Diatomaceæ."—Mr. S. Holmes: "A New Binocular Microscope with Isophotal Prism."—Mr. W. H. Gilburt, "On the Structure and Functions of the Scale-leaves of Lathræa Squamaria."—Mr. J. W. Stephenson, "On the relative Visibility of Minute Structures when Mounted in Phosphorus, Bisulphide of Carbon, or other Media."

Thursday, June 10.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, June 11.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.

Saturday, June 12.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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